

JPRS-CAG-85-022

1 July 1985

# China Report

AGRICULTURE

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# NEW GENERATION OF COOPERATIVE ECONOMY APPRAISED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in  
Chinese No 1, 23 Jan 85 pp 38-40

[Article by Zhou Qiren [0719 0366 0088] of the Agricultural Economics  
Institute of the Chinese Academy of Social Sciences: "An appraisal of the  
New Generation of Cooperative Economy from the Profound Turn of Events  
in the Countryside"]

[Text] Through the great transformation brought about by instituting the  
output-related contract responsibility system, profound changes have  
occurred in two areas of China's rural economic life: (1) the birth of a  
new generation of cooperative economy--the output-related contract system;  
(2) the start of a transformation in the countryside from a self-sufficient  
economy to a large-scale commodity economy. Theoretically, the relation-  
ship established between these two is one key to understanding the great  
changes in the countryside. To this end, it is necessary to evaluate  
the new generation of cooperative economy in light of the profound changes  
that have occurred in the countryside.

## I. Special Features of the New Generation Cooperative Economy

The new generation of cooperative economy in China's countryside, that is,  
the output-related contract system [linking pay to production], became  
widespread in the early part of the 1980's. It has two major features:  
the first is that contractors (mainly peasants) have independent decision-  
making power in business; the second is that because of the independent  
decisions and independent interests of contractors, diverse cooperative  
economic relations are formed through voluntary choice.

Although, abstractly speaking, laborers start with independent economic  
individuality, in view of the fact that interest considerations follow  
voluntary choice and form stable economic relations (that is, cooperative  
production or cooperation ownership), this is always the most common rule  
of a cooperative economy. However, the independence of members in  
cooperative economies and their mutual relationships in different time  
periods and in different developmental stages can have a certain differing  
character, demonstrating their different characteristics.

For example, the foundation produced by the cooperative economy in the early 1950's represented by the elementary agricultural producer cooperative, on the one hand, was not able to exploit the peasant system of ownership, particularly the ownership of the land that they had just struggled for and gained; and on the other hand, at that time the vast majority of peasants did not have the strength to independently engage in agricultural production activities that would enable them to make a living. Consequently, characteristic of the cooperative economy at that time was recognizing bonus-sharing certificates for putting land and funds into the communes, and at the same time, permitting in principle the freedom to join and leave the commune, but in reality still retaining the independence of the private ownership of laborers and peasants; at the same time, they developed the "three legged donkey" form of production cooperation on this basis.

There was a very low degree of growth for the cooperative economy in the 1950's. Its cells (that is, the family farm), organs (that is, the various preproduction and postproduction service organizations) and entire shape were far from sound when compared to the contract system tying pay to production. From this, it is not difficult to understand why it basically engaged solely in rather monocultural activity in the direct production sphere, and did not fully develop various cooperative activities, such as those related to technology, exchange, consumption, credit and even information.

For another example, the classical cooperative economies which have developed in modern times in Europe and Russia were primarily cooperatives within the spheres of exchange and consumption because of the independence of the laborers' private ownership system. This occurred on the foundation of a fairly well-developed commodity economy, and it has clear points of difference with the cooperative economy of the contract system tying pay to production, that is, the farm cooperative formed by collective ownership of the basic means of production (mainly land) and based on the independent farming decisions of the contractors.

Through a comparison, it is not difficult to see that the contract system tying pay to production maintains the basic substance of a cooperative economy and, at the same time, also has its own new features.

Now I would like to discuss what significance management independence, free choice and diverse economic relationships have, in the end, on China's countryside. And for this, we must examine the economic environment that allowed these new characteristics to appear.

## II. The Requirements Set Forth by the Development of the Rural Commodity Economy

There are very profound reasons for the fact that for a very long time in the past, China's countryside remained in a self-sufficient and semi-self-sufficient economic state. That is, due to the intertwining affects of a whole series of natural and historical factors, China's

countryside did not prepare the most fundamental conditions that would have allowed the full development of a commodity economy.

It seems that the development of a commodity economy requires two fundamental conditions.

Examined structurally, it requires a fairly well-developed system of social division of labor, that is, where different types of labor have stable lines of demarcation; at the same time, the interested parties engaged in independent activities in the division of labor system have ever-increasingly distinct individual interests. What we must note here is that with division of labor alone, but without independent individual interests, it is still not a commercial economic structure. For example, the primitive Indian communes, primitive Slav communes, Russian village communes and other ancient communal bodies that Marx talked about which had internal division of labor but no independence for its members, then, did not become cradles of commercial economic growth.

Examined mechanistically, it requires the permission for and the stimulation of the fairly free flow and shift of production elements, repeatedly coming together anew out of mutual choice, to facilitate the arrangement of those elements which are able to meet the continually changing demands of the socially required structure, and thus, through the role of the law of value, realize the proportional distribution of social labor.

It is precisely in China's countryside that the demands in these two areas are most difficult to satisfy.

There is no need to talk about the ancient and modern situation, for seen from historical results, the old China left us only a weak, feeble division of labor structure, numerous dependent small-scale peasants were subordinated to a self-sufficient and semi-self-sufficient life and the superstructure including thinking and concepts, dreaded and barred the flow of any elements of production.

The victory of the new democratic revolution, the success of land reform and the development of the first generation cooperative economy created the historical opportunity for developing a commercial economy in China's countryside.

After low-level social productive forces recovered and developed, increased surplus products were bound to require the development of a commercial economy; the peasants who originally had no way of engaging in independent activities, in a very short time, stood up by relying on the cooperatives, and then could not resist demanding the right to engage in independent business activities.

In the later half of 1956, peasants in Zhejiang's Yongjia County and other places set forth the demand for "contracting production down to the household," which clearly let it be known that real life had already posed a new problem which was the need to find the proper form, in a

cooperative economy, to develop peasants' independent business capability. At the same time, there were shifts and turns in the key elements of production in many places. The appearance of these phenomena was very well suited to the logic of commodity production. But regrettably, all of this work was recorded in the large volume of data "criticizing capitalism" of that period and after. That opportunity was not grasped.

And later, the system of "large in size and collective in nature" absolutely did not recognize the independence of commune members and strictly bond the activities of key elements of production. The tortuous historical process posed a difficult problem, that is, now to complete the reform of the collective "large in size and collective in nature" economic pattern in a continuing course in which production had been not broken off and there had been no shocks in society. The crux of the matter lay both in finding a form that was able to recognize, give play to and nurture the independent business capability of peasants on the foundation of collective ownership of the basic means of production (mainly the land), and at the same time, also stimulated the activity of the key production elements, and thus combined the production structure anew in activities, and adjusted production relationships anew.

This form now, finally, has been created and has been generally implemented, and it is, of course, the output-related contract responsibility system.

The most basic rule of the responsibility system is the contract. Through the link of contracts, the collectively owned means of production are dispersed through contractors (mainly peasants but also other associations) to manage independently. A distinct separation occurs here, that is, a separation of management rights and ownership rights occurs between the constituent components of the collective (peasant households) and the collective itself, including the assemblage of all of their own internal component parts. If we carefully distinguish, then it is not difficult to discover that this separation is different from any other form of separation that has ever happened in history.

In one stroke, the "contract-style separation" satisfied demands in two areas: to maintain public ownership of the basic means of production; and at the same time, also allow contractors to have rather full independent management rights and autonomous decisionmaking rights. In this way, boundup key production elements began to flow and various basic economic interests and the renewed combinations that occurred in free choice were able to be fully flexible, and the economy energy latent in the rural structure was quite fully released. Just as previously analyzed, these two are the most necessary conditions for developing a rural commodity economy.

Consequently, the development of a rural commodity economy arose unprecedentedly and intensely. The profound turn of events in the countryside helps us to recognize the special features of the new generation output-related contract responsibility system. The birth of this generation of cooperative economy, in a nutshell, benefits from the great creation of the masses under the party's leadership.



### III. The New Demands of Rural Commodity Production Will Guide the Continued Development of the Responsibility System.

How will the contract system tying pay to production develop? This will be determined by the new demands put forth by the rural production forms and by the economic structure in the course of future events.

At present, we can deny that the profound turn of events in China's countryside from a self-sufficient and semi-self-sufficient economy to large-scale commodity production is already speedily moving toward a developmental stage of "overall structural uncertainty."

What is called "overall structural uncertainty" simply indicates that the stable state of the original rural economic system has already been completely broken up. A whole series of fulcrums that supported the old system for a long time have already been fundamental shaken up. These fulcrums are primarily: the 80 percent of the rural labor that was bound to the land; "the large in size and collective in nature" system and the "large rice bowl" created by it; the use of a "price scissors" for industrial and agricultural product prices for industrial accumulation; the in-kind distribution style "circulation" system; denial of the law of value and the prohibition of the circulation of key elements of production; manmade administrative barriers between the city and countryside and between agriculture and industry; numerous obstacles and barriers in economic association, etc. They intertwined and firmly supported the original old system and enabled it to maintain a kind of structural stability. Now, as people commonly see, it accompanies rural economic prosperity and enables the original system to irreparably lose its stability.

The key to the next step of rural development is to promote new structural forms suited to the large-scale development of a commodity economy.

To this end, we must completely reorganize the rural industrial structure, and not only must we have an unobstructed circulation system, but we must also have a production system that is able to respond positively to the market.

This presents many even more profound demands on the development of the contract system tying pay to production.

In this connection, it seems that in the near future the development of the rural cooperative economy will have the following several tendencies:

1. It will meet the demands of the flows and shifts of the key production elements toward a production structure outside of agriculture in a broad sense, extend the development of a system of transferring contracts and of the large-scale contract system, and will create relevant, effective forms of economic activities.
2. Urban and rural productive forces and productive forces under different ownership systems will further blend together in accordance with the laws of

contracts tying pay to production, developing various forms of economic cooperatives in funding, technology, human talent and information which will overcome narrow limits.

3. There will be further growth of a new division of labor system, particularly the social division of labor suited to the development of a commodity economy, for example, functional strengthening of accounting, examination and verification, adjudication, market management, demand prediction, etc., strengthened tax and monetary levers, and excellent investment in environmental construction and the maintenance of a competitive order. The rural cooperative economy will form a very modern tie with the division of labor structure of the entire society, and develop a system of division of labor that is, internally, gradually more perfect.

4. Characteristic regional features will be even more marked, and the traditional diversification created by sealing off and divisions will move toward a modern diversification, open and flowing, based on its own special features and the broad strengths of each family. Opening up will not create a new formalistic single pattern but on the contrary, an even newer situation will appear to stimulate diversification.

The many significant real and theoretical problems brought forth in the even more profound changes in the forms of rural production activities and in the development of even more novel cooperative economies, require our study. We believe that the flame of thought and theory kindled by the realistic approach will certainly light the path for putting them into practice and forging ahead.

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CSO: 4007/223



NATIONAL

AGRICULTURAL DEVELOPMENTAL PROBLEMS REVIEWED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese  
No 1, 23 Jan 85 pp 47-50

[Article by Shi Shan [4258 1472] of the Chinese Rural Development Center:  
"Several Points Worth Exploring"]

[Text] A research report compiled and organized by the National Agricultural Administrative Division Committee, which uses sample data and clear arguments to discuss strategic problems of China's agricultural development, is an article well worth our attention. Since it was written by the staff and workers of the National Agricultural Administrative Division Committee, the arguments in the article catch people's attention all the more. After reading it, I felt there were several points that needed thorough discussion and so have especially set them forth for deliberation.

I. The "Theory of Paying Attention to Several Things at the Same Time"

The report states that "In determining the strategy for agricultural development, we must first consider production and livelihood, and at the same time, we must consider ecology. The relationship of these three is: ecology is the condition, production is the means and livelihood is the goal, and we should not study the ecological system apart from the production system." It also asserts that "the key to improving the ecological environment and maintaining an ecological balance lies in the necessity of paying attention to production, livelihood and ecology at the same time." I call this thesis the "Pay Attention to Several Things at the Same Time Theory." This thesis is a step forward compared to the way of thinking in the past which only considered production and livelihood and neglected ecology, and so it should be welcomed. However, when compared to the "Prerequisite Theory" (that is, strictly controlling population increase, rationally using natural resources and maintaining a healthy ecological environment as prerequisites for realizing the objectives of agricultural development and implementing various rural reforms), it is a step backward that warrants careful consideration.

"The Pay Attention to Several Things at the Same Time" theory first considers production and livelihood and then considers ecology, emphasizing the union of improving the ecological environment and developing production.

Another point raised in the joint article is that: "Balance is relative and imbalance is absolute, so we both must energetically strive for balance and yet we also must constantly attack balance and constantly set up new balances on new foundations, and only then will we be able to promote the constant development of production." This seems to include the idea that it is permissible to destroy (or smash) the ecological balance for production and livelihood.

The "Prerequisite Theory" stresses placing the rational utilization of natural resources and the maintenance of a healthy ecological environment on a par with the strict control of population increase as the prerequisites for developing agricultural production and implementing various rural reforms. That is, the development of agricultural production must firmly be handled in accordance with the laws of nature, resource use must be rational and a healthy ecological environment must be maintained. The ecological environment is continually changing, but if we are to make it ever better, then we must continually produce a new, even better ecological environment. Predatory farming methods must absolutely not be permitted and we must resolutely set up agricultural production on a scientific foundation. This theory was put forth in January 1983, and was "From here on, at the same time that we strictly control population growth, firmly protect various agricultural resources and maintain the ecological balance, we must strengthen agricultural capital construction, improve the condition of agricultural production, implement scientific farming...." and the further development of this wording, then, is to make "The Simultaneous Theory" into the "Prerequisite Theory," revising the words, so that "firmly protecting various agricultural resources" is revised to read "rationally use natural resources," and so that "maintaining the ecological balance" is revised to read "maintaining a healthy ecological environment." In the course of this development, that is the winter of 1982, leading comrades of the Central Committee set forth a new judgment on rural work: If problems appear now in the countryside, they will very probably appear in the areas of natural resources and the destruction of the ecological balance, and these will bring fundamental problems.

Consequently, the implication of this development is clear, and its significance and influence are far-reaching. It must allow a complete divorce of Chinese agriculture from predatory farming methods and allow it to enter a new stage of doing things in strict accordance with natural and economic laws. It also allows us to enter into a new stage in our relationship with nature, that is, from a period where nature was viewed as an alien force that had to be conquered and which we continually did battle against, into a new period which views man and nature as one entity that should develop in mutual harmony, and which some people have called the ecological era. From here on, we can no longer simply extract things from nature, but must first protect nature, protect and nurture natural resources and protect a healthy ecological balance, and then later, ask things of it. And moreover, there are right ways and limits to taking things, so as to allow nature to always be able to supply more and more things and a wonderful environment for living.

It is very clear that the "Theory of Prerequisites" is an important strategic policy decision, and was put forth in light of China's existing serious circumstances. To further set forth the "Theory of Paying Attention to Several Things at Once" after having the "Theory of Prerequisites" is clearly very inadequate and, really, a big step backward. The date of the study report is not clearly written, but it used the grain and cotton production accomplishments for 1983 and so it must have been drafted in early 1984 at the earliest. At that time, the "Theory of Prerequisites" had already been out for 1 year. So why did they also set out the "Theory of Paying Attention to Several Things at the Same Time?" This needs to be considered.

The article also feels that population pressure is a major factor leading to the predatory management of natural resources and of ecological imbalance, and this could make people feel that since population pressure will still exist in the future and moreover, intensify, and there is really no way to solve the problem of predatory management, and really, it cannot be [solved by] "paying attention to several things at the same time," and is nothing but empty talk. This conclusion evades subjective leadership faults, and thus cannot find methods for solution, either, and moreover, the conclusion itself does not accord with the facts and also needs to be looked into anew.

## II. "The Theory That Land for Agriculture Use Has Already Been Used Up"

The report points out: "Based on present technological and economic levels, China has about 9.5 billion mu of useable land, and combining current statistics from concerned quarters, the present use situation is: cultivated land is about 14 percent of the national territory, orchard land is about 0.2 percent; woodlands are about 18 percent, of which forests are 1.83 billion mu, and the rest is sparse woods, shrub, felled forests and the scars of forest fires, etc.; 4 billion mu, or 28 percent, of useable grasslands, of which 3.3 billion mu is grassy plains, and 700 million mu is grassy mountains and slopes; 280,000 mu, or 2 percent, of freshwater land surface; 30 million mu, or 0.2 percent, of coastal shoals; and 500 million mu, or 3.5 percent, of urban and rural residential areas. Apart from this, there is not much additional land." That is to say, land for agricultural use has already been used up.

There are two questions here: One is exactly how much land for agriculture use do we have anyway? And the second is how much land are we currently using and how are we using it?

At present, there are three arguments in regard to the first question, and three figures. The first argument is that there are 9.5 billion mu, including the 500 million mu of land used for residential areas, industry and communication, and this is nonagricultural-use land. Another argument is that there are 6.5 billion mu (the figures in an article by Comrade Ding Shengjun). And yet another argument is that there are 10.65 billion mu, not including land used for cities, factories, mines, communication, which take up 7 percent of the national territory. The 6.5 billion mu

figure is obviously too low, and the sum of present cultivated land, woodland and grasslands exceeds this figure. The two former figures come from one source. The argument for 10.65 billion mu was suggested after an assembly of specialists in various fields and actual workers had studied the issue again, and we should say that is rather close to reality. Compare it to the 9.5 billion mu argument! It is about 1.6 to 1.7 billion mu greater, and this plus what the author set forth can supply close to 1.88 billion mu of land for further development and use for agriculture, forestry and animal husbandry. I feel that land used for agriculture should have a figure that everyone uses in common, because when everyone casually puts out figures, it not only leads to confusion but there is also no way to study and probe the problem.

The second question is what is the current utilization situation for land used in agriculture? First, in agricultural areas and in semiagricultural, semipastoral areas, large tracts of barren mountains and slopes that are not used can be seen everywhere, and there is also some uncultivated land. In pastoral areas, pasture land with very little vegetation can be seen which could also be termed wasteland. Some woodlands are in a quasi-wasteland state of neither forest nor non-forest. Middle- and low-yield land make up more than two-thirds of the cultivated land. And the irrational conditions of land use in mountain areas is particularly striking. In sum, much land for agricultural use is not used or else is used very poorly, and there is still great potential. Putting most of our energy in the past into cultivated land was due to certain objective factors of the time, and from here on, we cannot do things that way. We could say that the problem of comprehensive planning and rational utilization of all agricultural-use land has just begun, and there are a great many things that must be done. For example, barren mountains and slopes must be greened and used; the very large area of land subject to soil erosion must be conscientiously brought under control; nearly 100 million mu of tea-oil trees and bamboo forests lack good management, have very low yields and must be energetically improved; and the scarcity of manmade grassland is very striking compared to the United States, the Soviet Union, England, Australia and New Zealand, and we must get on top of the situation with vigorous strides; there is too much middle- and low-yield land and this, too, is a serious problem, etc. To suggest that "land for agricultural use has already been completely used up" while facing this situation is worth further consideration.

### III. "A 30 Percent Rate of Forest Vegetation Cover Is Unreasonable"

The article thoroughly discusses the ecological question and has some criticism for ecologists, among which the clearest criticism is: "The argument that some ecologists have indiscriminately drawn from foreign situations is unreasonable in thinking that only when we raise the national forest cover rate to 30 percent will we be able to protect the ecological balance." Leaving aside ecological theory for the moment, the article obviously holds that China's forest cover rate cannot reach 30 percent in the future.



Looking at the present situation, in October 1983, the Forestry Ministry commended 80 advanced forestry-creating plains counties. Their forestry areas are generally about 15 to 20 percent of their total areas. The new situation is that agricultural land has been protected and there has been a great reduction in natural disasters, such as wind, draught and frost; under these conditions, the yield is stably increasing, they are self-sufficient in timber or even have a surplus, self-sufficient in fuel or basically self-sufficient, clear out straw to develop animal husbandry, and some counties already have a new situation of simultaneously advancing in agriculture, forestry and animal husbandry and comprehensive development. It is particularly worth noting that apart from the cultivated land taken up by farmland shelter forests, the other forests, such as those on both sides of roads, river banks, around villages and around houses, are all land areas occupied by villages, roads and rivers, and so land with multiple uses, yet playing the role of forest land. These counties have already placed their hopes for quadrupling agricultural production on the development of forestry, animal husbandry and related processing industries.

In August 1983, I went to Liaoning's Fuxin City and saw Fuxin and Zhangwu Counties which are under it. It is on the south edge of the Ke'erqin sandy plain, and there are also shifting sand dunes within its borders, and for a long time it was a poor, low-yield, and semiagricultural, semipastoral area of Liaoning. But due to upholding forestry and grassland creation over a long period, it now has created 4.2 million mu of forest area in the municipality, or 23 percent of the total area. The shifting sand dunes have become luxuriant woodlands, damage from windstorms has been greatly reduced, and the peasants have also begun to get rich. Now they are still continuing to create forests and also energetically create pastureland, making manmade pastureland and create a pleasing situation. They plan to create 6 million mu or 40 percent. Right after the establishment of the People's Republic, this area was part of a treeless area, and forests were only 3.3 percent of the area. The needs of production and livelihood forced them to persevere for a long time in creating forests and grasslands, and they ended achieving a tremendous accomplishment. After the forests had displayed their strength, there was a further rise in the people's deep affection for the forests, promoting the further development of forestry. Since plains and semiagricultural, semipastoral areas are able to do this, and because the forestry creation conditions in mountainous areas are even better, their accomplishments could naturally be even better.

China is a country with many mountains and its true potential is in mountain areas. Looking again from the special features of our land used for agriculture, of the 10.65 billion mu, apart from cultivated land, the rest of the land is only capable of handling forests and grass. It can, and should, all be put into woodland and grassland, and then it could constitute 58 percent of our total land area, with one-half, or 29 percent, as woodlands. The cities which make up 7 percent, (that is, 1 billion mu) of the national territory, and some of the land used for factories, mines and communication could become woodland. Commercial

forests, such as fruit orchards, mulberry plantations, tea plantations and woody food oil forests actually are woodlands, and in the same way, serve the function of forests. Both pasture land and farmland also need shelter forests. Viewed in this way, you have to say that it is possible to make the forest cover reach 30 percent. Now, then, to decide that 30 percent is impractical is truly a hasty conclusion. We should find the solution or the clue to the solution in the advanced models in various areas.

#### IV. The "Theory That We Can Only Provide Fodder Grain and Cannot Provide Forage Land"

The article suggests that we gradually develop animal husbandry into a relatively independent production sector, and that by the year 2000, consumption of fodder grain will reach 230 billion jin, and these are all quite good tentative plans. But it also set forth the argument that we would only be able to provide fodder grain and would not be able to provide forage land, even though it is recognized that the economic results of supplying land are much, much better. They feel that it is impossible, "considering the actual situation of China's little cultivated land and the characteristics of the farming system, to want to carve out large amounts of land to use for forage from the currently cultivated land and to use it for the specialized production of foreage." Rather, we can only gradually increase the proportion of forage or, through crop rotation, rush-plant a little, and only then can the places with the proper conditions consider planting some forage crops on poor, dry land.

This is an old problem, that when we talk about carving out fodder grain, the figure is large, but when we talk about forage land, then we are very stingy. What kind of attitude is this, anyway? Probably it is the faint-hearted thinking formed over a very long period of short grain supplies, and because there was no animal husbandry industry to speak of, it was just emptyhanded, lip service. If they were really serious about supplying fodder grain, then there would be no problem with supplying forage land, and a multiple-cropping system would not affect the allocation of land, so that what would be the difficulty if calculating according to the area sown does not work!? The crux of the matter lies in lack of confidence in raising grain yields.

It is best to look at the real situation. There are now some areas where one season's summer grain production can fulfill the grain ration and purchase task, and aside from the cash crops, the produce of the next crop is used mainly for fodder. The forage land problem in these areas has already been solved. There is a good deal of land in rotation and fallow land in semiagricultural and semipastoral areas, and if they were to strictly implement crop rotation, then animal husbandry could be greatly developed and it would also be beneficial for increasing grain production. For a long time in certain southern provinces and autonomous regions, they have used 1 billion jin of paddy rice annually to raise hogs, and they really should allocate some areas for one crop of fodder (like corn), and this would also be beneficial for improving the soil. In some areas with inconvenient transportation, grain cannot be transported out, and so

this is an even better reason why they should grow more fodder, and change the grain into meat, milk and eggs for transport out. Only in areas where grain is in relatively short supply should we still be somewhat prudent about supplying forage land. But to generally say that we cannot is too absolute, and, also it does not suit actual current circumstances. Is this not a new form of "arbitrary uniformity?"

#### V. It Is Not a "Same-Time Theory" but an "In Succession Theory"

There is a small problem to mention in passing. The article said "In areas with severe soil erosion, ... only at the same time as we do a good job in solving the food and clothing problems of the masses, will we have the possibility of and the enthusiasm for withdrawing land from cultivation and planting grass and trees." At first glance, this is a "Same-Time Theory," but when we look at it closely, it is still an "In Succession Theory," in that only after we solve the problems of food and clothing for the masses will we be able to plant grass and trees, because "doing a good job in solving" is the same as "solving." This is not paying excessive attention to wording, but rather it reflects a kind of attitude, and really is just another way of expressing the idea that "until the problem of grain has been adequately solved, we cannot consider other matters." In addition, it equates the planting of grass and trees with the withdrawal of land from cultivation, showing that they are still at the ideological level that gets mired in minor issues.

There are many areas with seriously eroded land, and they can plant grass and trees absolutely without using cultivated land. Here, too, the three materials are all lacking, and can only be solved by planting grass and trees. And so increasing grain yield through planting grass and trees is an important way to solve the grain problem in these areas. Of course, this does not mean that we must not get a good handle on grain production, but rather, it means that, beyond getting a good handle on grain production, we can use several seasons of creating forests and planting grass to simultaneously and conscientiously get a good handle on grass- and tree-planting work and on organizing specialists to manage and protect them. This, then is "Same-Time Theory." The two counties mentioned above that belong to Fuxin City have done this. They are just now solving the problems of food and clothing, and still are relatively poor, low-yield areas of Liaoning, and yet, in creating forests and planting grass, they have become advanced areas of the province, and in the future, they can become even more well-off than the well-off areas, because forest and grass resources have become their advantage. The actual experience of the two counties not only plays a role in solving the real problems in semiagricultural and semipastoral areas and in areas with severe soil erosion, but it plays an even bigger role in solving the ideological understanding problems of cadres. Their experience can help us break free of many old conventions, and we should sum them up well and popularize them.

The above few problems are closely connected with formulating agricultural developmental strategy and so I have especially set them out for discussion.

NATIONAL

RURAL SPECIALIZATION, INDUSTRIAL STRUCTURAL REFORM REVIEWED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS]  
in Chinese No 1, 23 Jan 85 pp 29-33

[Article by Chen Huayi [7115 5478 0001], of the Guangdong Provincial Party Committee's Rural Section: "Rural Specialization and Industrial Structural Reform"]

[Text] Before the Third Plenum of the 11th CPC Central Committee, for a long time the countryside could not escape from the confines of the traditional natural economy, creating a very irrational production structure. The whole rural economy had no place for commodity production. Consequently, there was simply no way to speak of suiting measures to local conditions and of developing specialized production.

The historic output-related family responsibility system has become a new rural economic management form, allowing elements of production to reorganize within circulation, and creating the conditions for the division of labor within the family to be transformed into social division of labor and for the appearance and replication of specialized households and new economic associations, thus guaranteeing the full development of specialized rural production. From an examination of the development of specialized rural production, we can see the broad prospects for rural commodity production and can also see a developmental path for a socialist cooperative rural economy with Chinese characteristics.

I. Constraints and Leaps in the Structural Reform of Production

The specialization of rural production is a widespread trend. For a long time in the past, China's rural economy was unable to go beyond the scope of small-scale agricultural economy, and it was improbable that even if it could somehow get on the track of a socialist commodity economy, it could immediately implement a strict high level of specialized production. Consequently, in this process, production specialization premised on a rational production structure can represent the developmental level of productive forces. Specialization is definitely not uniformity. The production structure is a complex, comprehensive indicator which embodies the level of production specialization. Therefore, in studying the reform of specialized rural production, we must begin by examining changes in the structure of production.



Changes in the production structure which suit China's national condition are mainly the horizontal broadening and deepening of production. Since the founding of the People's Republic, these changes have not rested, but rather, they have gone through a historical process of constraints and leaps. Fengchi Township of Guangdong's Nanhai County is representative of the Chu Jiang delta countryside. There are two aspects to the constraints in its structural changes.

First are the restrictions of the regional economy. As a suburb of Guangzhou, the township economy inevitably was easily affected by the urban form of industrial transfer, and it was able to use its own plentiful labor to take part directly in certain types of division of labor; at the same time, it was also inevitably affected by the demands of urban consumption, with emphasis on the production of vegetables, poultry, eggs, fish and other fresh and living agricultural and sideline products to satisfy the consumption needs of the urban population. And in the economic system of Foshan Prefecture, as an area made of reclaimed land, of course they also permitted the township economy to take part in nonfarming economic division of labor. However, in farming division of labor, you can only be limited by the area of grain fields; this lays the foundation for the production distribution of Fengchi farmland, and greatly restricts adjustment of the proportion of grain and cash crops on the cultivated land. Changes in the production structure's first level are controlled by the division of labor of the regional economy.

Second are the manmade constraints. The development of productive forces cannot be intentionally changed by people, and structural change certainly cannot be stopped, so that if grassroots reform does not work, then inevitably it will proceed to the next higher level, but it will definitely be constrained by people.

Back in the early days of cooperativization, Fengchi peasants tried to change the second level of production structure, developing family farming, particularly poultry and animal raising. But the so-called "self-criticism" in the late 1950's, caused reform of the production structure to suffer a setback.

In 1964, after the Central Committee issued its "60 Articles," Fengchi Township's peasants became very active for a while and again developed their hidden social resources. One was to use the vast consumption market of Guangzhou, growing vegetables, raising poultry and animals; a second was to use their abundant cheap labor, accept subcontracts from large plants, and develop collective handicrafts industries. New avenues developed before their eyes, but this bright picture for the development of family businesses did not last long. During the "Cultural Revolution," family sideline occupations were again cut off as being the "tails" of capitalism. And because of these quite severe manmade constraints, the reform of the production structure and the adjustment of crop distribution have wavered and not advanced, creating a very irrational structure.

We must pay attention to phenomena in the course of China's rural economic development that are contrary to reason, that is, to structural reform leaps. In the past, owing to destruction by "left" tending policies and the harm of "grain as the key," throughout the whole 30 years prior to the third Plenum of the 11th CPC Central Committee, there was no way to develop a diversified economy for the countryside as a whole, such as farming. Moreover, during the "Cultural Revolution," large factories halted work to engage in "revolution," and many village collective enterprises then took advantage of this opportunity to develop, and enjoyed unprecedented good fortune. In this period, Fengchi Township developed a whole group of processing plants, for such things as polishing, electroplating, weaving rattan, etc., with raw materials brought from Guangzhou and Foshan.

The unbalanced changes that appeared in the rural production structure breeched the hesitation of first and second administrative levels, and leaped into an even higher level of structural change, creating a combination of agriculture, industry and commerce. This was a tremendous leap and advance. This advance was not a result of the development of social productive forces, but developed within the sluggishness of overall social productive forces. With this particular historical background, rural enterprises took advantage of fortuitous historical luck. This is a striking feature of China's rural economic development process. We can see that the production structure of the period of constraint was very irrational, but it also forced a rational administrative current, and laid a path for the later specialization of rural production.

## II. The Rupture and Reformation of The Labor Structure

The direct consequence of constraints on changing production structure is tremendous waste of labor. In 1978, before the Third Plenum of the 11th CPC Central Committee, 786 of Fengchi Townships's 960 agricultural laborers were engaged in agriculture, 168 were engaged in commune or brigade industries, and sideline occupations and 6 were engaged in other service industries. According to mathematical calculations, it would only have taken 173 laborers to achieve the proper farming level on the township's total land area at that time. That is, apart from the people in industry and sideline occupations, there was still an excess of 613 laborers. The problem of surplus labor was a rather prominent and widespread phenomenon throughout the entire countryside.

Such a massive labor surplus (more accurately, this was a time of concentrated labor surplus among various dispersed labor forces), was either wasted or was seeking a way out. We know that as the most flexible element in productive forces, it is unlikely that labor would become ossified and they naturally wished to find a way out.

Where is their way out? In a township like Fengchi, land resources are unitized, without enough scope to open up new land; on the other hand, it is limited by the division of labor areas with reclaimed land, causing a boundary for adjusting cash crops that is difficult to break through. Consequently, surplus labor must circulate vertically, straddling even higher structural

levels; or else it moves out to new realms beyond the township level economic system, using even broader resources. This, then, forms the intrinsic motive for breaking up the old labor structure.

We have discovered that the labor that asks to enter higher levels of the production structure or to flow out is actually that segment of rather high quality, capable villagers with technical talents, an understanding of business and certain social ties, that this segment of people is most adverse to "eating from the big rice bowl," and that once they have the opportunity, they always hope to immediately let their talent blossom. Since cooperativization, they have continually gathered and formed a condensed, latent centrifugal force to contend with the old labor structure. However, the long-since-formed, highly centralized administrative system has not become more flexible simply because of opposition, and allowed individual laborers to move about freely, particularly in prosperous areas. Consequently, the result was that human talent and organizations were both contradictory and unified. Under the guidance of these people, many processing businesses gradually entered the collective economy field of vision. It seemed that a whole group of new enterprises were started up by people with technical know-how and connections, and this, to a certain extent, had centrifugal energy, so that the income in the village-level economy increased, commune members' income rose correspondingly, offsetting the centrifugal function produced in the former labor force and forming a new relative balance. Moreover, due to the development of enterprises, the collective economy was fairly robust, and through adjustments in the division of labor, had the capacity to supplement agriculture through industry, thus enabling the income of various specialists to achieve quite a high level of equilibrium and be fairly stable, thus satisfying the subconscious egalitarianism in some people. Consequently, the defect of "the big rice bowl" was partially hidden by the rather stable high income and so the breakup of the old labor structure then lacked intrinsic motivation.

After the Third Plenum of the 11th CPC Central Committee, the productive forces of the entire countryside used every possible means and burst out suddenly, continually attacking the old economic system. In areas where the original economic situation was quite backward, they implemented the output-related contract responsibility system in one place after another, and we have seen new forces suddenly come into play, shaking the whole economically developed area.

The implementation of the contract system tying pay to production fundamentally liberated rural productive forces, and the long dormant contradictions became even clearer. The former labor structure ended up split open, and labor was thoroughly "untied." For the first time in over 20 years, the labor force in the highly centralized administrative system was able to roam freely, and so begun to make new associations. All labor began to judge themselves conscientiously, while at the same time they began to look closely at all the major production elements around them, and in trial associations, strove to give full play to their advantages, thus allowing the new associations to be able to produce the optimal economic results.

One is that labor forces were "unchained" the economic role brought to bear by Guangzhou became very obvious, and much surplus labor flowed out of farming into industry, sideline occupations, storage, transportation, commerce, service industries, animal husbandry and fishery.

Two is that, at present, labor's structural flow is realized primarily through shifting and supplementing, and much labor still leads a drifting existence, and so they can still begin new industries.

Three is that much labor has left the land, but few households have left the land. Rural division of labor and division of occupation has mainly been carried out within the family, and the social division of labor and division of occupation is still in the preliminary stage. We can see that the specialization of rural production is just barely developing.

### III. The Development of Specialized Production

Even though the rural specialization of production is still just barely developing, all those production projects left behind by the period of collective management become the basis for the specialization of production. On this foundation, once the system is opened up, commodity production can achieve overall development, and production projects will gradually increase.

First, there is a sequential progression in the division of labor and division of occupation within a family. Because every family and household has a little piece of responsibility land, there is a firm foundation for using the family as the management scale for economic accounting units, and everything begins anew from this fact.

When the family division of labor had just begun, people discovered that apart from the few days of the agricultural busy season, field management for the responsibility fields that they themselves farmed could actually be handled early in the morning and late in the day, and that when there was much surplus labor, they could arrange for it freely from peasant households, and generally select rather familiar production management projects which served to supplement family income and formed family sideline occupations.

Some peasants immediately appeared in the capacity of "specialists" in family farming allowing the division of labor within the family to become clear. Fengchi Township has 18 skilled craftsmen, 57 people good at management and 28 people who have received specialized training, and so this is a group of peasants who are long on technical skills, who understand management, have certain social ties and a rather high quality of labor. Even though they have not attained any formal technical title, in their actual work activities, they are a group of outstanding skilled producers and managers. Many of them are bright, courageous pioneers who have been through trials and hardships and experienced life, and so are called able people.

Once family businesses are started, there are sudden changes and divisions within the development of each individual family economy. One is that in most peasant households, they suit measures to the person and there is a



clear, definite division of labor for every task. A second is that in most of the internal divisions of labor within families, the main labor pursues nonagricultural fields, and even though they have contracted out responsibility fields, in reality, the sideline occupations have already become their main occupation. A third is that in some peasant households, the main labor engages in farming, and their economic development is also quite fast, but the preconditions all require that they be skilled farmers. A fourth is that some peasant households engage solely in various industrial and sideline occupations or in commerce.

In sum, the division of labor within families is constantly changing at varying speeds from "small and complete" to "small and specialized." The primary work of most households has already changed from the grain production of the past to mainly industry and sideline occupations, commerce, service industries or to various other types of cultivations. In 1983, of the 496 households in the township, only 35 or 7 percent of all peasant households produced grain as their primary occupation. This was the first fascinating change after the development of family farming in Fengchi Township, and it is also the first important criterion for us in judging the formation of specialized production. Only when we have this sharp change can we provide the social and economic foundations for the birth and development of specialized households.

"Specialized households" have emerged as the leading representatives of rural productive forces. Compared to the average peasant household, the field of vision of specialized households is broader, they select superior industries, expand the management scale, and frequently run ahead of the average peasant household, and consequently, they both earn more "superprofits," and also introduce certain benefits of scale. Beginning in 1979, Chen Zhian of Xibian Village broke into the circulation field, transporting pond-raised fish. Under constantly more relaxed policies, he changed from transporting with a single cart and motorcycle to a large car, from transporting and marketing several dozen jin a day to several thousand jin, from retail to wholesale, from cash transactions to buying and selling on credit and from physical labor to intellectual labor, with equipment constantly made newer, scale continually expanding, management constantly improving and income constantly increasing, and so became a specialized household in the transport and marketing of pond-raised fish which has caught people's attention. Every line of business has this kind of outstanding person and one after another, they are showing their talents, promoting the continual development of all rural specialized development.

With the development of specialization, land transfer has become a very prominent phenomenon. Many peasants, for various reasons, wish to transfer out their land. 1) Farming income has already become of little consequence in family income; 2) not only does the labor process itself of some specialized occupations have little close relationship with farming, but it often produces conflicts at work time; 3) the labor force is inadequate. All of these households very quickly developed very strong demands for ridding themselves of ties to the land. Actually, one is an economic reason and another is an ecological reason. The former is expressed by the fact that

farm income can be overlooked in family income and in the conflicts in work times. The later is shown in the fact that it is difficult for various occupations to express their mutual relations within the rather small space of the family, and to be relatively independent, or in other words, within the family management scale, various fields such as agriculture, industry and commerce have only a direct economic relationship, but no clearly direct ecological relationship, and when economic interrelationships bring about a loss of value, separate functions appear. After the development of the family business within the microeconomic structure, the separate functions which existed between family farming and family industry and commerce were rational. This is the inevitable result of family division of labor and division of occupations after the implementation of the family contract system tying pay to production and it is also an important indication of the development of rural specialized production.

Concretely speaking, there are two necessary conditions for peasant households to transfer land; one is that nonland businesses must be fairly stable and adequate for providing a way out for all the family labor; and second is for there to be no fear of trouble at home. This includes two areas. On the one hand, those who transfer onto the land need to have socialized services for production and on the other hand, those transferring off the land need to have this kind of social guarantee, so that if one day the nonland businesses cannot be continued, they will be able to return to the land. In reality, both are problems of production socialization.

At present, various factors affect the relative stability of nonland businesses pursued by peasants and the income they get from them, and there is still no way to be fully prepared; and the second condition depends on the creation of various service systems for rural commodity production and the creation of orderly management systems of the village people's committee (or natural village cooperative economy), and the two systems are far from perfect. Consequently, concentrated land transfer is still not widespread. This shows that if we do not put a great deal of effort into perfecting a social system, we will tend to restrict the further development of production specialization. Only by creating the proper conditions in these areas will things progress smoothly.

#### IV. The Formation of a New Economic Structure

After the reform of the rural system, the economic boundaries created under the past administrative regions and the old administrative system that tied up the flow of labor have already been broken up, and the production structure of the natural economy has already disintegrated. Labor, funds, technology, equipment and information are already going ahead with selection and circulation, creating various special occupation, and separating off yet again from the original specialties. The creation of specialties is determined by comparative advantage of results. Up until the present, because of the constant flow of labor and the constant reorganization of production factors, dynamic changes have been occurring in various specialized production projects, and as a result, the rural industrial structure and economic organization still do not have--and cannot have--a solid, set

form. Thus, one thing is for certain: major changes have already occurred in the rural economic structure and have, correspondingly, created newer embryonic forms.

We can see that many new industries are just suddenly appearing and constantly developing in breadth and depth, creating a solid rural developmental structure. Comparing Fengchi Township in 1983 to 1978, we first find that there has been a major adjustment in the distribution of farming. According to a survey of 100 households, the total area sown in 1983 was 740 mu, of which the area in grain was 627 mu; routine vegetables, 67 mu; Western-style vegetables, 43 mu; and other crops, 3 mu, with the ratio of grain to cash crops being 85:15 and this was a fairly major breakthrough. Second is the expansion of the traditional space for farming, developing from cultivated land for farming to indoor growth of vegetable sprouts, with 2.84 million jin, and an output value of 438,500 yuan, a 15-fold and 7-fold increase, respectively, over 1978. Third is that animal raising has broken through the old situation of raising only hogs, and there has also been a turn from the better, away from passive raising to active raising. The enthusiasm of the masses for raising poultry and eggs is especially high, and the output value in the township created by poultry and eggs alone reached over 600,000 yuan. Fourth is the increase in varieties in industry and sideline occupations on the original foundation, and the gradual concentration of various business-type or "three come-one compensate" processing occupations such as gunnysacks and clothing manufacture have rapidly surpassed the old enterprises of weaving rattan, making wooden boxes, polishing and grain-processing plants. Fifth is the incredibly fast development of commerce (including the storage and transportation industries), resulting in many new businesses in the circulation sphere, and in addition to the continued expansion of the moving and transportation business on this original foundation, new fields have been born which depend on favorable geographic position and weather, such as warehouse storage, transportation, the transport and marketing of pond-raised fish, etc., and they have already become major sources of income for the rural collective economy and for family economies. In sum, whether it be the production sphere or the circulation sphere, important industries have suddenly burst forth in both, creating a fresh base for commodity production. Regionally oriented production fields have appeared throughout the countryside, becoming a special feature of specialized rural production. For example, the embryonic form of specialized regions has already been formed, such as vegetable-sprout villages, Western-style villages, moving and transportation villages, villages that transport and market pond-raised fish and gunnysack townships.

At the same time, in the course of the specialization of commodity production, the rural economic process enters into the larger national economic system. The old economic organization has been smashed and a new economic organization is now being formed. It has several special features; one is the further maturing of division of labor and division of occupation within the family, which is already taking part in the division of labor within the larger national economic system, becoming the objective foundation for specialized, socialized production; a second is that many family businesses

are just now changing from being "small and complete" to being "small and specialized;" a third is that dual-occupation households with one occupation as the primary one are an important front army in rural commodity production, particularly in economically developed areas, where households in which nonagricultural occupations are the primary ones are already the absolute majority of peasant households and this is the backbone of production specialization; fourth is that although the proportion of specialized households is not great, the quantity of new commodities that they supply is relatively great, their commodity rate is quite high and their rate of development is rather fast; a fifth is that on a foundation of developing primary-occupation households and specialized-households, new economic associations have emerged as time requires to meet the demands of even larger scale combinations of labor, funds, technology and equipment in the process of specialization. The continual flow of various production elements produces dynamic connections. Because of the requirements of combining various production elements are conducive to producing different combined forms, such as combined labor, funds, technology and equipment, and all of these form diverse economic units based on the family business, and together, facilitate the continual operation of rural commodity production.

The new rural economic associations are powerful motive forces for specialization, and specialization, in turn, promotes the formation and development of diverse forms of rural cooperative economy. Up to now, they have already created two different forms: one is a specialized cooperative economy. It is linked to specialized production and because economic results are of vital importance, economically, they have a very close mutual relationship, and at the same time, because they are a dynamic association, they have the ability to reorganize. The other kind is the regional cooperative economy with the village as the unit. It is linked to land resources, and the development of family businesses has allowed the economic ties between them to loosen up, and at the same time, it has a stable relationship with resources.

At this stage, the matter of how we are to properly set up a cooperative rural economy to benefit the development of rural commodity production and to benefit production specialization has already become a very pressing task. We must break out of the bonds of old concepts and patterns, seek truth from the facts, and seek out and create diverse forms and types that possess flexibility, based on the developmental laws of commodity production, and thus meet the demands of rural commercialization, socialization and specialization.

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CSO: 4007/222



NATIONAL

# INDUSTRIAL ECONOMY IN SECOND STAGE OF RURAL REFORM DISCUSSED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese  
No 1, 23 Jan 85 pp 24-28

[Article by Mei Xingbao [2734 5281 0202]: "Study Industrial Policy, Develop an Industrial Economy and Do Well with the Second Stage of Rural Reform"]

[Text] China's countryside has undergone more than 5 years of reform, and we can now make the following general assessment: that is, that the preliminary reform within the rural cooperative economic structure has already been basically completed, and that the development of the rural economy has started to enter the second stage, that is, transforming in the direction of specialization, commercialization and modernization. In a country like ours where the social division of labor and the commercial economy are not developed, with a large population and with relatively little cultivated land, the key to completing the second stage of rural reform is in applying the correct industrial policies, adjusting the current irrational rural production structure and developing an industrial economy. What is called industrial economy is simply to treat the production management of an agricultural product as an industry, and give unified consideration to the various technological, economic and social problems between city and countryside, between the various fields of agriculture, industry, commerce, construction, transportation and service, and between different regions and sectors and thus set up industrial linkages suited to the special characteristics of rural economic development. Below, I talk a bit about some of my not fully mature views on this question.

## I. The New Circumstances and New Problems Created by the Excellent Situation of the First Stage of Reform

Due to changing the commune system which was not suited to the development of China's agricultural productive force and the comprehensive implementation of the responsibility system tying pay to production, in the past few years agricultural production, which had created anxieties for a long time, within a short period developed quite vigorously, and an unprecedented scene of flourishing prosperity appeared in the very energetic

rural economy. The problems of food and clothing have already been solved for peasants in the vast majority of places, and some peasants have begun to attain a low level of being well-off. The gap between industry and agriculture is gradually shrinking. In the later part of the 1950's, the consumption ratio between peasants and workers was about 1:3, in 1978, it was 1:2.76, in 1981, it had shrunk to 1:2.45, and in 1983, it had gradually shrunk to 1:2.04. According to a sample survey of peasant families in 1983, peasant households with a per capita annual net income of 500 yuan or more accounted for 11.9 percent of all peasant households, 11.6 percent were between 400 and 500 yuan, and those with 100 yuan or below fell from 33.3 percent in 1978 to 1.4 percent. The breakthrough advances of epochmaking significance and with the clearest material indicators in the development of the rural economy have been the production of grain, cotton and edible oils.

In 1983, our grain production reached 774.6 billion jin, 165.1 billion jin more than in 1978, and in 1984, it is expected to top 800 billion jin. Looking back over history, it took 13 years for the total national grain yield to climb from 400 billion jin in 1958 to 500 billion jin in 1971, and on this foundation, it took 7 years to top 600 billion jin, and then it took 4 years to top 700 billion jin, yet it only took 2 years to top 800 billion jin. In 1984, grain per capita reached 800 jin, nationally. And this is not a figure for a fortuitous bumper crop year, but indicates the increasing perfection of the rural cooperative economic system, particularly the relative success of the large-field contract system; at the same time, it indicates the normal, fitting benefits of 35 years of rural capital construction and of agricultural technological transformation.

Both domestic and foreign experience tells us that after grain per capita passes 800 jin, there will be qualitative changes in people's consumption structure, an increase in the amount of animal foods and a gradual decrease in grain foods. At that time, changes in people's food consumption structure do not increase in proportion with former consumer goods, but rather, some increase and some decrease while at the same time improving in quality, becoming more popular and more commercialized, and this is a trend that cannot be reversed. This trend has already appeared in many of our commodity grain areas.

Breakthrough developments in grain production have provided an excellent opportunity for adjusting the rural industrial structure and developing an industrial economy, because after peasants have solved their problems of food and clothing, they inevitably want to develop new production skills and become rich as quickly as possible; at the same time, the diversification of people's consumption inevitably stimulates the production and management of many fields. However, in the past 2 years, we have been intoxicated to a certain extent by the steady rises in grain production and not gotten a good hold of the opportunity to boldly adjust our industrial structure, and so caused an uncoordinated situation in rural economic development. Many cultivated fields in mountain areas that should be withdrawn from cultivation have not yet been returned to

forestry, those in lake areas that should be returned to fishery have not yet been returned, and the speed of development of forestry, animal husbandry and rural industry has been slow. Comparing 1983 to 1978, total national grain yield rose 27 percent, but the rearing of large animals within animal husbandry (yearend figures) only rose 10.2 percent, and sheep fell 2 percent. In the past the growth rate for hogs was faster than that for grain, and the number of head in inventory increased 1.5-fold between 1952 and 1978, while at the same time, grain rose only 86 percent; but in the 5 years since 1978, the growth proportion changed, and the number of hogs in inventory in 1983 rose only 28 percent over 1978, which was just about the same as growth for grain. In the past few years, the proportion of the total output value for agriculture within the total output value for agriculture, forestry, animal husbandry and fishery showed no basic change, and in 1983 the proportion had fallen 0.8 percent from the previous year.

The rural industrial structure is irrational, particularly the undeveloped animal husbandry industry, and so surplus grain cannot be transformed into meat, eggs and milk, and the advantages that many areas have in grain yields are difficult to change into the advantages of a commercial economy. Animal husbandry plays a dual role in the development of the rural industrial economy. Linking upward with farming, it is a continuation of grain production; linking downward with processing, it is the beginning of grain reproduction. If animal husbandry does not develop in coordination with farming, not only will surplus grain not be able to be converted and increased in value, but the rural industries with the brightest prospects, the fodder industry, product promotion industries and the leather and wool industries, will lose their means of support, and it will be difficult for much rural surplus labor and idle funds to find a way into the production realm. In recent years there has been "difficulty in selling grain" in many rural areas, and although there have been problems with blocked circulation, basically speaking, this reflects the irrational rural industrial structure. Jiangsu peasants say "In the past, there were a lot of hardships in farming, but now we suffer wrongs in selling grain." Rural cadres in Jiangxi say that in the past people said "With grain in hand, our hearts were at ease:" but now they say "With grain in hand, our hearts are distressed." The grain surplus that is reflected by the widespread phenomenon of "difficulty selling grain" in grain-producing areas across the nation is relative. A low-level grain surplus is one in which animal husbandry and industries that use grain as a raw material are not developed, a transitional period surplus during the adjustment of the industrial structure. In many areas, on the one hand, they cannot sell their grain surpluses while, on the other hand, they have to bring in large amounts of corn and wheat from the outside, and also have to bring in many nonstaple foods. They are also short of round-grain nonglutinous rice and sweet rice needed in areas short of grain, and this is a contradiction that reflects the structural irrationality of grain itself. On the one hand, the grain surplus cannot be sold, and on the other, there are clear shortages in the marketplace of meat (principally, lean meat), eggs, milk, fish, poultry and especially milk products

and marine products, and this, too, is a contradiction, reflecting the fact that farming and animal husbandry are not coordinated. On the one hand, many places have a grain surplus, and on the other, the grain field area is only very reluctantly being adjusted, and some places in recent years are still digging limonene hemp, expanding grain cultivation, and this, too, is a contradiction, reflecting the fact that the relationship between grain and diversified farming has not been handled well. On the one hand, there is a grain surplus, while on the other, mountain areas, and particularly forest areas, still have a large grain purchase task, and forestry and agriculture still cannot shake off the label of self-sufficiency in grain, and this contradiction reflects the fact that our economic policy is still severely restricted by self-sufficient, natural economic thought. The contradictions described above are all new problems under an excellent situation, and all appeared after developmental breakthroughs in grain production. In addition, we must also understand that the reform of the urban economic structure that has already begun is just now developing depth and, on the one hand, urban reform can give new impetus to the second stage of rural reform and open up even broader markets for rural commodity production while, on the other hand, rural and small-town enterprises also face a serious challenge, for in the past, rural and small-town enterprises could use rural labor cheaply, and could obtain a little "favor" from urban industry. But now the circumstances have changed, and they face a new situation of intense competition. Consequently, rural industry must also conscientiously consider and solve the difficulties in selling its own products and the difficulty in buying raw materials.

To solve the problems of difficulty in selling grain and difficulty in selling the products of rural and small-town enterprises, we must clear out the channels of circulation, and find some methods in circulation. And yet circulation can only solve the problem of overstocking of products they already have, but after a national "product surplus" appears, it is not possible to find a way out solely through the field of circulation. At the same time, production determines circulation, and whatever is produced is exchanged, and so the key to satisfying society's need for new products lies in structural work, in using a correct industrial policy to promote the rationalization of industrial structure and in giving impetus to the development of the industrial economy.

## II. Changing Trends in the Rural Industrial Structure and the Basic Principles That Should Be Followed in Adjusting Industrial Policies

If we want to adopt policies that will promote the readjustment of the industrial structure, we must first have a good handle on changing trends in rural industrial structure.

Generally, we can make the following judgment about current changing trends in China's rural industrial structure:



The monocrop structure of the closed natural economy is changing to an open, pluralistic, commodity economic structure; the "grow rice to eat" farming structure, "cut down trees" forestry structure and "raise hogs" animal husbandry structure of the past are developing into coordinated farming, forestry and animal husbandry and changing into a comprehensive industrial economic structure of agriculture, industry, commerce, construction, transportation and service industries. The proportion for animal husbandry is constantly rising and getting into line with the pace of farming development. Rural industry (including construction, transportation and mining) will take the lead in development, and the growth rate for rural and small-town enterprises will be far ahead of farming. And so in the near future, in the majority of rural villages, an industrial structure will appear of "agriculture (and forestry and animal husbandry), processing, the light industry," with construction, construction materials and transportation active among them, and with commerce and services around them. This industrial structure of "agriculture (and forestry and animal husbandry), processing, and light industry" can solve the problem of marketing products and the problem of developing new products fairly well. This is particularly so because agricultural production is a process of moving living materials, and the products that it produces are generally large, living or fresh, spoil easily and are not easy to preserve or transport, and so only through processing are they able to be realized or increase in value. At the same time, only great effort in developing the processing industry will be useful in enabling the various products of agricultural production to achieve comprehensive utilization.

To get a good hold on the developmental trend of an "agriculture (and forestry and animal husbandry), processing, and light industry," we must use the viewpoint of a commercial economy to evaluate and to formulate industrial policies. In studying the mode of thinking of industrial policy, we must "look forward in all things." This is the thought characteristic and time perception of an information society, and we cannot "look back," as in a agricultural society, nor can we only view the present, as in an industrial society. To this end, we must break through those old concepts of the past, such as the concept of commercial grain and rural grain, the concept that the countryside only engages in agriculture, and the concept that land is the primary means of production, etc. According to the value of the land used for rural capital construction, the original value of fixed assets of industries and sideline industries in a few villages have already surpassed the value of the land, and although the land in these areas is a basic means of production, it is not the primary means of production. Clarifying this one point can help us more keenly recognize negotiable transfers and rental of land. Foodstuffs from here on out will be able to take many channels into even broader territory.

Because industrial policy affects the entire economy, changes cannot occur over night; relatively stable periods of time are necessary and so adjusting industrial policy also must follow the following principles:

First is the principle of two beneficial cycles. Industrial policy both must consider principles of economic benefits and must pay attention to principles of ecological balance. In adjusting the industrial structure, people can economize on materials in the ecological system and on inputs and outputs of energy, but the degree of disruption must not exceed the "limits" of the ecological system. In the past, "destroying forests to open up the land" and "filling in lakes to create fields" maintained a low-level balance between population and grain reproduction at the cost of breaking up the ecological balance, and this was wrong; in the same way, now many mountain and forest areas are closing off the mountains for long periods of time, and lop-sidedly carrying out a policy of "cutting one tree, and building one road," stressing only the natural ecological balance and neglecting the manmade ecological balance that man can promote, and so letting trees rot on mountain tops and people remain poor in their homes, and this, too, is undesirable. The natural production capacity of virgin forests is the lowest, and that of middle-aged and young trees is fairly high, and so we should cut the trees that should be cut. It is my opinion that the felling of trees should be in accordance with the laws of tree growth and development, following the rules and regulations of forest management, and carrying out the "local government responsibility system."

Second is that principle of industrial circulation, that is, the economic principle of a united process of production-processing-marketing. The core of this principle is that production management must be geared to the market, with a good handle on one product as one industry. Let funds, materials, technology, information and other elements be able to smoothly circulate in industrial circulation, with mutual access between city and countryside, and moreover, each of the links from production, processing, storage, packaging, transportation to urban marketing should begin comprehensive scientific research and systematic policy studies. Set up a whole coordinated, unified and effective production management and administrative system. This is the principle of vertical relations.

Third is the principle of synchronized coordination which must be maintained in horizontal relations, encompassing the whole set of relations between various fields. Currently, many areas that have "difficulty selling grain" are very reluctant to adjust their grain area downward, feeling that our grain per capita is still far from that of developed countries, so grain areas cannot be touched, but this way of viewing things is very one-sided. I feel that grain development must suit people's consumption structure and consumption level and that it must suit the development of animal husbandry, the food-processing industry, and the feed industry. Grain production, animal husbandry, the feed industry, and the food-processing industry--these four legs--must strike the ground together and must develop in synchronized coordination. Based on the present circumstances of the other three legs, it is quite appropriate that China's grain production be maintained at 800 billion jin for the coming few years, and that we should encourage grain-growing areas to grow superior grain varieties, and based on higher yields per unit area, reduce the grain area correspondingly.

Fourth is upholding the principle and idea of systems theory. The adjustment of an area's rural industrial structure is a complex systems projects. The direct object is the industrial policy of increasing one or two products and adjusting one or two industries, to be able to lead to a horizontal chain reaction in many areas and a vertical chain reaction at many levels. Before we formulate industrial policy, we must carry out a quantitative analysis based on qualitative analysis. We must set up mathematical models and target functions based on economic, ecological and social restraining parameters, use computers to carry out analog analysis, do a feasibility study of the plan based on ecologic and economic grounds, and in addition, predict the estimated costs of the probable consequences of carrying it out, and later, through a comparative study of many plans, select the optimal plan for adjusting the industrial structure. We must determine the focal point for investment, the allocation of labor, technology to be brought in and distribution of production according to the decided plan. Currently, real work in this area is still stalled on a general level of qualitative analysis, and many areas still do things by relying on "the will of senior officials." A very little investment, that is, a bit for you and a bit for him, results in settling nothing at all. This management method could be called that of "lower levels entreating the lower leading cadres to nod their head, and this does not suit commodity production.

By maintaining the above four principles, the implementation of industry policy can attain structural benefits. Comprehensiveness is the basic feature of the policy. One policy adjusting agricultural structure can, to a broad extent, affect various economic sectors, such as agriculture, industry and commerce, and construction, transportation and service, and can lead to multilevel in-depth changes within agriculture itself. This industrial structural effect is a "multilevel, progressively intersecting effect," and is also the complete function of the rural ecologic-economic system. With the development of rural specialized division of labor and the socialization of production, the functions of the rural economy have intertwined. The degree of rural economic benefit is determined more every day by the pattern of links between industries, between products, between economic organizations and between various administrative levels, and "the results for the whole are greater than the results for the sum of its parts." Why is the implementation of the correct industrial policy able to attain structural results? Because the policy is able to mobilize vast resources, just as the author of the book "Megatrends," the American Naisbitt said, it can enable people's "labor creativity to be at its most exuberant period," and allow the labor used in various rural occupations or the labor used in the production or circulation sphere (including animate and inanimate labor) to be rationally distributed in various fields throughout the whole countryside, allowing the full utilization of resources, the smooth transformation of advantages and the greatest creation of wealth.

### III. The Focal Point of Present Policies To Adjust Industry

Because policies have an intertwining effect, a policy set forth at one administrative level can affect other administrative levels, and below, I have simply made a general analysis of the areas affected by each policy.

1. There is an urgent need in farming, forestry and animal husbandry to adjust the current purchase and sales policies and price policies, and promote the rationalization of the internal structure.

The essence of unified purchasing and unified sales is the distribution on the basis of value of a product substituting for the turnover of commodities according to price. It is a distribution system, not an exchange system. It is a transitional administrative measure that was practiced during a particular historical period of the past when the commodity economy was not developed, food and clothing were major issues of human life which were to be treated with utmost care, and when the industrialization of the nation depended on accumulated funds from agriculture, and at that time, the benefits were greater than the harm, but now, the harm outweighs the benefits. The greatest abuse is that the producers have no autonomy or power of choice in adjusting the industrial system. With the system of distribution on the basis of values, the state lets some people eat fixed-price commodity grain, and others eat grain they produce themselves. This creates barriers between people and at the same time, creates divisions between city and countryside and between mountain areas, forest areas and lake areas. I suggest that apart from timber and a few very valuable medicinal materials which cannot be opened up (primarily to protect resources), everything else should be opened up. The present method of increasing the price for grain above the purchase quota and the "inverted 3:7" proportion used to calculate prices (30 percent at the market price and 70 percent at the negotiated price) are still transitional methods, and the basic policy measure is "changing unified purchase to tax," and changing the dual channel price for grain to a single channel price. Changing the value allowances for the grain sector to clear subsidies for those who eat commodity grain. And grain ration card will then be abolished along with it. The relationships between industry and agriculture and between city and countryside will then enter a new developmental stage. After unified purchase is changed to taxation, the grain departments (bureaus) should be changed to purchase and supply companies or changed to "grain, oil and foodstuffs management companies." At the same time, administer grain and feed separately, and feed companies can be put under animal husbandry bureaus. Combine feed, fine breeding and epidemic prevention.

Adjusting the grain price policies is mainly changing the dual channel price to the single channel price, and eliminating price inversion, while at the same time carrying out a price differential policy with high-quality goods at high prices, suiting the price of nonglutinous round rice, and sweet rice, and widening the differences in prices. Hogs should also be sold at high prices for high quality. The purchase price for timber is too low and should be raised so that producers can profit.



2. Within agriculture as a whole as well as in industry, commerce, construction, and transportation, we must apply the correct technology, funding, taxation and labor policies, support specialized households and associations of various sorts, and combine specialized production with overall management. We must aid specialized grain households with funds and technology. Current grain prices are rather low, and yet at present it is not possible to raise them broadly. While not finding a balance in the macroeconomic policy of pricing, we must then implement microeconomic regulation, regulating distribution areas, and "subsiding agriculture through industry and sideline occupations." The amount withheld or amount of task to be handed in cannot be determined by the amount of land area used. But we must find a rational way to allow each field to achieve what it should achieve and to let all workers compete from the same starting line.

Animal husbandry must get away from the position of a sideline occupation of farming, and become an independent industry. And the feed industry should get preferential treatment in loans and in taxation.

In the areas of funding policy, first, we should encourage peasants to collect funds and undertake joint stock companies, and carry out stock management; second, we should develop social support; third, we should extend low-interest industrial loans; fourth, we should strive to bring in outside funds; fifth, we should combine and use rural construction funds and operating expenses of various fields, and not scatter funds too thinly, but rather bring it all together and begin several industries, creating core products and backbone industries.

Taxation policy should pay attention to the development of industrial economy. The circulation of new industries should be taxed as an economic entity. Moreover, they should be exempt from income tax for a certain period.

At present, various economic forms have appeared in the course of the development of various fields. Our labor policy should fit labor's various forms of circulation and combination. Many of our current households, family industries and enterprises that hire labor are "hybrids" produced in a socialist environment, and this hybridization has a definite advantage.

Naisbitt says "the transitional period for economic types is precisely the period when the creative spirit is most vigorous." We must give heed to and protect the people's enthusiasm, but policy in this area can only set out a large framework, and cannot be too detailed, too extensive or too strict. We must first diversify and then standardize, seeking development within diversification, and making our choices in development in line with the demands of economic laws and the needs of the masses, thus gradually creating a stable economic structure. Our economic principle is the leading position of public ownership, but "this does not mean that all trades, all units and all areas must have public ownership." We do not permit the existence of an exploitative system, but exploitative phenomena and an exploitative system are not the same thing.

3. The rationalization of the whole rural industrial structure also requires the rapid development of market towns. Market towns are the bridges and links of urban-rural relations, and the place where surplus rural labor gives full play to its abilities, the home of rural industry and the exchange center for rural commodity production. Once market towns develop, we will be able to further promote the development of the division of labor. Consequently, whether or not market towns are prosperous and thriving is a clear indication of whether or not the local rural commodity production is developed and also of whether or not the local rural industrial structural is rational. From here on, market town must be open to the peasants, not just locally, but also to people from the outside, and so policies for registering households must be adjusted and the rural administrative system must also be reformed, so that villages that are together should be combined as towns, using towns to administer villages. We should welcome those qualified peasants to come into the city to open stores, run plants, manage businesses and engage in transportation.

Finally, different areas should carry out different industrial policies. Border areas, then, should have flexible industrial policies. A country can have special regions in border areas, and in the same way, a province or a county, too, can adopt flexible border policies within their powers and functions. Border and remote areas must develop new industries selectively suiting measures to local conditions. As for the problem of qualified personnel, "bring it in for the short term, train it for the middle term and educate it for the long term." We must bring in qualified personnel and technology, but it will not do to solely rely on pay and material incentives, because no matter what, in material treatment and livelihood, the interior cannot compete with the coast, and poor areas cannot compete with developed areas, and so we must have a "migratory" policy to support remote areas, and must nurture the "permanent" building up of qualified personnel.

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CSO: 4007/221

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REFORM OF AGRICULTURAL TAX REVIEWED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese No 4, 23 Apr 85 pp 36-38, 59

[Article by Zheng Jiaju [6774 1367 7467] and Ye Shaogun [0673 1421 5028] of the Agricultural Economics Department of the Fujian Institute of Agronomy: "Thoughts On Reforming Agricultural Taxes: A Survey of Tax Questions in Minhou County"]

[Text] I. New Situations and New Questions About Current Agricultural Taxes

Since the agricultural tax code was promulgated in 1958, 26 years have passed. It has played a specific role in bolstering the collective economy, encouraging increased output, giving the state a handle on certain material goods, accumulating capital and adjusting incomes. But with the development of farm production and changes in conditions, "The Code" is ill-suited to current realities, and the gap between the scope and volume of tax assessments and actual conditions is growing. From our understanding of the situation and from our survey materials from Minhou County, the following new situations and new questions are being encountered in collecting agricultural taxes:

1. The burden on the farmer from the agricultural tax has been dropping year by year, and is now at a historic low.

Changes in Tax Burdens Since Liberation--Minhou County

Year/Item	1952	1957	1965	1979	1983	1983 (after exemptions)
Total Grain Output (Dan)	1,937,777	2,179,683	2,806,487	3,616,893	3,769,025	
Prorata Tax Assessed (Dan)	278,282	181,412	155,513	155,132	155,142	112,942
Tax/Total Output (%)	14.36	8.32	5.54	4.29	4.12	3
Tax/Farm Income (%)	8.97	4.53	2.75	2.23	1.4	1.02

In the period right after liberation, when the state requisitioned grain from farmers rather than procured it, agricultural tax burdens were rather heavy. During the First 5-Year Plan, the state implemented unified and assigned procurement and sale; and although some grain was taken from the farmer, increases occurred only for procurement grain while grain requisitions fell sharply.

The Minhou survey reveals that 1957 agricultural taxes only amounted to 8.32 percent of total grain output--a 72 percent drop from the 1952 figure of 14.36 percent. Agricultural taxes were reassessed downward after 1961 in order to prop up farm production, so that by 1965 the tax versus total output percentage had fallen further to 5.54 percent. Improvements in the rural picture after the 3d Plenum of the 11th CPC Central Committee led to a big jump in grain output. Also, since there were no increases in taxes for the increased output, and since spot reductions and spot preferences were implemented for less affluent brigades, the agricultural tax burden rate fell again. By 1979, prorated agricultural tax assessments had fallen to 4.29 percent. By 1983 it had fallen to 4.12 percent. In the same year, the real rate after reductions and exemptions was only 3 percent, the lowest rate ever. If we compare the 1983 real agricultural tax rate with the 1952 rate, it amounts to only 20.89 percent of the earlier figure. Looking at the ratio of agricultural taxes to total farm income, the drop is even greater, going from 8.97 percent in 1952 to just 1.02 percent in 1983--a mere 11.37 percent of the earlier figure.

There was also a big drop for agricultural taxes collected per capita of farm population and per mu of tilled area. The 1952 per capita agricultural tax in Minhou was 102.69 jin; in 1983 it was 22.67 jin (in real figures)--just 22.08 percent of the earlier amount. The 1952 per mu tax was 67.82 jin and in 1983 it was only 31.09 jin--only 45.84 percent of the earlier figure. (Because the area of tilled land had fallen by 47,011 mu while the population had increased by 227,092, the drop in the tax per mu was less than for the per capita tax.)

## 2. Agricultural taxes fell sharply as a proportion of total tax revenues.

Because the amount of revenue from the agricultural tax was basically stable while enterprise income and industrial and commercial tax revenues rose dramatically, agricultural tax revenue fell proportionally. Agricultural tax revenues comprised 31.82 percent of all revenue in Minhou in 1957; in 1983 it comprised only 9.35 percent. Taking 1965 as a base figure of 100 for all tax items, in 1983 the agricultural tax stood at 106.85, while industrial and commercial taxes were 186.09, and enterprise income hit 2,172.19. This was the situation in a primarily agricultural county; the figures for the province as a whole show the trend even more. Since 1980, Fujian's agricultural tax as a proportion of total revenue has been in the 3 percent range. The agricultural tax has fallen from its preeminent position in total revenues to play a mere ancillary role. It demonstrates China's soft stance on agricultural taxes and points up the growing strength of the Chinese state-run economy. Revenue collection is not as it was just after liberation, when the first focus was on the farmer.

But in another respect, it should be observed that this fall in the position of the agricultural tax in the total revenue picture diverted attention of the party and government in all areas away from agricultural taxes, compared with what was the case around liberation, so that the split between taxes and actual conditions over a long period of time went unnoticed.

3. The farm economy is developing rapidly, and yet over the past 20 years the agricultural tax has remained unchanged, so that in many places the disparity between nominal and actual facts keeps growing, as evidenced in the following concrete ways:

A. Tilled land assessments are unrealistic. In recent years, tilled land has been taken over by the state and collectives or occupied by the masses without any notice to authorities to remove most of this land from the agricultural tax rolls. In 1978, tilled land in the Xiangqian Commune totaled 59,346 mu. In 5 years, a drop in area of 1,302 mu was reported, leaving the 1983 figure at 58,044 mu. But from what we have seen, this figure far from tells the whole story; and if we were to project at half the rate which our survey showed the decrease in tilled land to be in the typical production brigade, tax is still being assessed on 6,670 mu of land which is no longer being tilled.

B. Assessments for normal annual outputs are more and more divergent from actual outputs. Today's assessments are ones made in the sixties, with a few later spot adjustments but basically no big changes. The 1962 assessment for Minhou was 1,442,568 dan of grain; in 1983 it was 1,438,222. After 21 years the figure had only been adjusted by 4,346 dan--a mere 3 percent. Meanwhile, actual output in 1983 was 3,769,025 dan which was a 1.26-fold increase over the actual 1962 figure of 1,664,239 dan. Thus, assessed output for 1983 only amounted to 38.16 percent of actual output. In Yanping Commune, the actual 1983 figure was 239,640 while tax was collected on only 60,663 dan--just 25.31 percent.

C. Today's tax rates have lost any real meaning and fail to reflect actual burdens. The nominal rate in Minhou in 1962 was 10 percent while the actual rate was 8.67 percent--not too far off the mark. But in 1983, with the nominal rate at 10.79 percent while the actual rate after exemptions and reductions was 3 percent, the gap had become extreme. The nominal rate is no longer a prorated assessment. It no longer measures taxpayer burdens, nor does it carry any real significance for the economic policies of the party and the state.

4. Although agricultural tax burdens have been greatly reduced, there are no ends to the levels of assessments, so that the farmer still feels the weight to be burdensome. Our survey took us to Guyang Brigade in the Hongwei Commune located in Minhou's piedmont district. This brigade had 1,948 people in it in 1983 with average earnings per capita of 282 yuan. Total tax receipts were 9,802 yuan, or 5.03 yuan per capita, which was just 1.78 percent of net income. Of this figure, agricultural taxes amounted to 8,302 yuan or 4.26 yuan per capita--just 1.51 percent of net



earnings. Total burden for 12 additional assessments brings the total tax burden of the brigade to 64,835 yuan or 33.28 yuan per capita, which amounts to 11.8 percent of net income. The tax burden as a percentage of total burdens is only 15 percent, while the agricultural tax burden was just 12.8 percent of the total burden, while the 12 additional assessments amounted to 87.2 percent. The most blatantly unreasonable assessments included subsidies for assigned purchase of swine, poultry and eggs, and for training the people's militia as well as five temple construction projects, for a total burden of 7.59 yuan per capita. In addition, there was an obviously excessive subsidy of 3.55 yuan per capita for low-level cadres. The people make no distinction between state, collective and commune burdens; nor do they question which ones are reasonable. They just complain that the burdens are too heavy, and would hardly be moved by tax relief in the one area of agricultural taxes.

5. Because of differences in development in the farm production of different regions, imbalances between respective burdens crop up.

First, there is the question of burdens in flatland regions versus those in hilly ones. The agricultural tax rates assessed for more than 20 years in the flatland-region Xiangqian and mountain-region Yanping communes are both 11 percent. The responsibility system brought farmer enthusiasm for production fully into play, but given the greater potential for production in mountain regions, the extent of production increases there were far and away in excess of those in the flatlands, where the potential was much less. So the problem of manifest imbalances between burdens presents itself.

Next, if we compare grain-producing regions with those which have switched to cash crops, we find that between 1979 and 1983, 3,668 mu were diverted to citrus crops, comprising 9 percent of total tilled area. Based on our survey, 1 mu now planted with citrus crops can earn 1,250 yuan, as opposed to a mere 360 yuan for a double crop of rice (at negotiated prices). This amounts to an increase in returns of 890 yuan per mu, so that the total increase in earnings for the whole 3,668 mu diverted from rice to citrus is 3,264,520 yuan. With an agricultural tax burden of 42.7 jin per mu (with a 7.69 yuan rebate), the real rate for rice land is 2.14 percent, while the real rate for citrus land is only .6 percent, and the nature of the imbalance is even more glaring.

In addition, after the implementation of the output-related responsibility system, the basic taxpaying unit shifted from the production brigade to the contracting household, so that problems of imbalances from one household to another were bound to occur.

## II. Tentative Initial Suggestions For Agricultural Tax Reform

From the standpoint of these survey materials, the current agricultural tax system has become grossly unsuitable and the time for reforms has come. We would like to see the following principles come about: (1) We must both respect history and tax-collecting habits and also put agricultural

production in tune with new movements toward development of commercialization and specialization. (2) We must both continue to soft-pedal tax policies while we take into account the three interests and provide for the needs of the state in building "the four modernizations." (3) We must adhere to the principle of higher burdens on higher earnings and lower burdens on lower ones, while maintaining flexibility. Six initial suggestions of a concrete nature are as follows:

A. With reference to absolute land rent versus graduated land rent principles, the agricultural tax could be split into a tax on land and a tax on the farm product. The agricultural land tax would be applied to tilled land across the board for all crops without regard to the type of crop, with the annual harvest figure set in accordance with present grain output and with collections made at a new tax rate. The old nominal tax rate is meaningless and should be abolished. Based on the Minhou County situation, the new rate could be at 5 to 6 percent of real output as an appropriate figure. If the assessed output were pegged to the actual 1983 figure of 3,769,025 dan for the county and calculated at 5 percent of assessment, the amount of tax would be 188,451 dan. This would be only 7,038 dan or 3.88 percent more than the prorata figure of 181,412 for 1957. On a per capita basis, tax paid would be only 1.4 jin more than in 1957. On a per mu basis for tilled land, this would mean an increase of 1.9 jin over 1957. But 1983 income in the county (based on our typical survey) of 337 yuan is a 2.38-fold increase over the 1957 figure of 99.6 yuan. Per mu yields for the county in 1983 average out to 1,037 jin, a 1.23-fold increase over the 1957 figure of 466 jin. This burden should be manageable for full-time farm households.

B. To rectify the imbalances between burdens where rice is planted from those where economic crops are grown, over and above levying the agricultural land tax, any areas planting economic or other crops should pay a farm products tax at the point of sale (with rice exempted). This tax can have a rate fixed on the basis of the difference in earnings between the crop in questions and earnings on grain. Different products would have different rates. Higher volume sales and higher prices would trigger higher taxes, and if the goods were not sold they would not be taxed.

C. The heaviest burden on the masses at the moment is not state taxes but burdens from the commune and withholdings by the collective. Whatever portion of these assessments is unreasonable should be strictly controlled. Reasonable guidelines on what withholdings and assessments are reasonable should be set by regulation, and a ceiling should be fixed for how high withholdings may go. Obviously unreasonable assessments, such as temple-building projects, wining and dining, and sending gifts should be firmly prohibited. The principle for cadre subsidies is that they be cut to a minimum, and a lid must be placed on excessive subsidies.

D. The trend of rural economic development is away from self-sufficiency and semi-self-sufficiency toward a commodity economy, so agricultural taxes from now on should gradually move from payments in kind to payments in case. Because of traditional habits and the two different prices for grain, reforms here can be in two stages. In the first stage, payments in cash

and payments in kind can be combined, with the agricultural land tax payment made primarily in grain where grain predominates and in cash where economic or other crops predominate. But there should be some supplementary payments to account for the differential between fixed and negotiated grain prices. Those planting grain who wish to make payments in cash can be permitted to do so where feasible. All payments on the farm products tax for cash crops and other crops should be in cash. In the second stage, after unified and assigned procurement of grain has been totally eliminated, all tax payments should be in cash.

E. It is suggested that surtaxes be eliminated to simplify red tape. When a contract goes to a household, the surtax on whatever agricultural taxes revert to the household should go to the household as well. To simplify procedures, the surtax can be built into the formal tax schedule and carved out from central tax payments for special local uses later.

F. When reformulating the agricultural tax, there should be a comprehensive accounting of tilled lands and recomputation of annual outputs, so that taxes fall on those who have the fields and the output. When a household contracts for a plot of land, it should be responsible for the field, the yield and the taxes.

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CSO: 4007/343

NATIONAL

ECONOMIC FORMS IN RURAL AREAS EXPLORED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese  
No 4, 23 Apr 85 pp 39-42

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Economic Forms"]

[Text] I. Current Categories of Rural Economic Forms

There are at present four types of economic forms in the countryside, over and above associations of an economic cooperative nature prevalent all over China, such as state-run economic and supply and sales cooperatives and credit cooperatives. First, there is the cooperative economy, which is the most prevalent and important of rural economic forms, including the local cooperative economy which evolved out of former production teams; the former commune enterprise which is now township- or village-run enterprise; and other new economic associations now developing in the cooperative economy.

The second category is the peasant household economy. This is divided into two parts: the contract economy and the self-managed economy. The contract economy is a management level in the cooperative economy while the self-run economy has the character of an individual economy. The present specialized contract household and the specialized self-run household found in the countryside are built on these two parts of the peasant household economy. The self-run specialized household may be described as a relatively independent new form of individual economy.

Third, there are the new economic associations which were organized voluntarily by peasants after implementation of the rural output-related responsibility system and based on principles of equality and mutual benefit--quite different from the old "three-tier economy." The forms, degree of association, range and size of these associations vary widely, but all have developed rapidly. While some have already become rather well-developed cooperative economies, most are still in the midst of development. Whether from the point of view of their mode of association, of ownership of the means of production, operational management, or mode of produce distribution, all simultaneously incorporate elements of several economic forms. So these may be characterized as "hybrid economies."

The fourth economic form and the very small minority are management modes which hire workers. These now have a transitional appearance. According to our surveys, all four forms are now in the process of development in the countryside.

The reason so many different economic forms have appeared in rural areas can be attributed to the fact that party policies fit the objective realities of rural economic development. Taking this fact as the starting point, two primary factors exist:

First, there is the demand for development of productive force which is a factor internal to the birth and development of diversified economic forms. In the present overall picture, the level of China's rural productive force is still backward. This is not to say that everything is backward but rather that the situation is multilevel and unbalanced, with a kind of development appearing in the midst of backwardness, advances side by side with retreats, and traditional farm implements coexisting with socialized modern tools. This situation obviously will not allow for a single format; it requires the coexistence of diverse economic forms and common development. From a historical point of view, China's rural villages are basic units for peasant production and peasant life and a product of thousands of years of natural economy. It is held together by blood ties with single surname or several surname clans as the major entity and supported by the small peasant economic mentality and the feudal concept of ancestry. It holds the land as the basic means of production and relies mainly on population increase to further expand production. Its goal is self-sufficiency and its fundamental characteristic is a "sealed-off mode" of operation. There have been major upheavals in the countryside since liberation but no fundamental change in the characteristics of that self-sufficiency and "sealed-off" mode of operation.

The model, built on the rural village, which had "three-level ownership with the brigade as a base" and was a "merger of government administration with commune management," along with the system of "collective operation and equal distribution" and the single operational policy of "making grain a network" over a long period of time not only has not thoroughly restructured the sealed-off character of the rural village; it has also tied the peasant to the land forever, dampened peasant enthusiasm for production and seriously hindered the rational movement and diversified combination of all the major productive elements. If rural productive force is to develop these bonds must be broken and a diversity of economic forms must make combinations out of the movement of major productive elements. The appearance of diverse economic forms coexisting is the result of the peasant breaking his bonds to select for himself what he wants to be a part of. It is also a repudiation through practice of the ossified models of the past.

Second, after the rural output-related responsibility system was put into effect, there was an increase in production materials and funds which the peasants themselves possessed. A large quantity of excess labor existed and began to move around. Markets were opened. These were direct causes of the



birth and development of diverse economic forms. Surplus rural labor generally amounted to a third of the total labor force; and within that surplus there was no shortage of education, special abilities or talents for business. At the same time, there was an abundance of rural natural resources as yet untapped and unused. With this labor, these funds and markets, and these talented people out there, it was inevitable that once party policies were relaxed, diverse economic forms would appear.

## II. Basic Characteristics of the Various Economic Forms

At the present time, rural economic forms are still in the process of ceaseless development, evolution and recombination. Nevertheless, we can get an inkling of their basic features.

**Local Cooperative Economy:** This is based on the sphere of the old production team. It is an economic form with a two-tier management realized through the responsibility system and which disperses labor. Since for this form land is the primary means of production, it has salient local characteristics. Its position is extremely important. It is the producer of grain, cotton and oil, which relate to feeding and clothing the people and provide overall stability. It is also what the peasant relies upon when he goes out to take risks in commodity production without apprehension. Major indicators of the emergent development of the local cooperative economy include land transfers, with many peasants desiring to or going ahead to transfer their land. As township enterprise and diversified management develops, increases and stabilization of household income and concentration of land in the hands of those best at farming are inevitable. As for production, working of the land in many areas had reached its limits long ago under basic farm production conditions. This is especially the case where farm technology has yet to have a breakthrough and extensive production increases for grain, cotton and oil are unlikely. But the trend is still toward developments in the areas of industries and sidelines.

**Rural Village Enterprise, What Used To Be Commune Enterprise:** It developed as an offshoot of the local cooperative economy's parent form. However, its sphere is larger, extending to what used to be the commune or production brigade. Of the many diverse trades involved in rural village enterprise. Most consist of manufacturing, building, construction materials, mining, transportation, commerce and services, along with some farming, animal husbandry and forestry. This economic form is distinct from the local cooperative economy. (1) It is not local in character. (2) There is a multiplicity of operational modes, not all of which are tow-tiered or labor-dispersing. (3) The owner is not necessarily the manager, and in all but a few developed areas, the great majority of rural village enterprises have only a few owners who are managers, while mostly the owner does not become involved in the operation. Rural village enterprise has been developing rapidly in recent years, but under the influence of mistaken leftist ideology, management systems and operational modes for these enterprises have had many problems, the most egregious of which is that the collective enterprise has become in fact "a little bit of the

people as a whole," stifling enterprise activity and depriving the peasant of his due. With reform of rural systems now moving forward, the operational modes and management systems of rural village enterprises are undergoing a change, with developments moving toward "returning rights and benefits to the people."

**New Economic Associations:** This is a novel economic form in which peasants join together according to the principles of free will and mutual benefit. Some of these have become democratic management systems, with collective accumulations and distribution according to work or primarily so. At the same time, there also exist some joint-equity and profit-sharing cooperative economic organizations of a more improved form; but most are still economic organizations with the character of mutual assistance associations which are now in the process of developing into cooperative economies. At present, these economic associations and operating businesses are not all that stable. They move rather quickly to shift products as the market changes. They tend to be looser in their associations, with members for the most part consisting of family and friends. Their economic relations have predominantly egalitarian elements. They follow no set model, but take a number of associational forms. The primary advantage of these new economic associations is that they operate autonomously, employ flexible methods, readily adapt to change, and can match the competition. Their role and position in rural commodity production is becoming more and more evident, and some have reached considerable size. From what we know, the largest peasant economic association in Shaanxi is already approaching 300 people in size.

**The Household Economy:** As the basic production and management unit in the countryside, the peasant household economy is the most prevalent and most numerous of economic forms. It is composed of two parts, the contract economy and the self-run economy. The contract economy is one level in the local cooperative economy, and some peasant households contracting for some industrial and sideline projects have now become specialized contracting households. Most of the self-run economy is relegated to sideline industries, with a minority now developed into self-run specialized households. The self-run specialized household is a relatively independent form of individual economy which is now developing at the most rapid pace, constituting about 80 percent of all farming households. With today's economic developments, contracting and self-run economies are always lumped together so it is difficult to ferret out who exactly is a contracting specialized household and who is a self-run specialized household.

### III. Development Trends for Today's Diverse Economic Forms

First, use of economic associations involving equity shares is becoming more prevalent. At the present time, outside of local cooperative economic organizations, joint operations with equity shares is a form which is pervading all other economic forms. Most new economic associations by far are employing this form. It is also being used in some rural village enterprises, and developments are moving rapidly. In some cases, township and village enterprises throughout a county implement "integrated management with split stocks." Based on surveys, the joint equity economic mode can take any one of three forms. First, there is "voluntary investment in stocks, with profits split according to shares, guaranteed equity and

dividends, and freedom to sell out of one's share." Most new economic associations by far and some newly established township and village enterprises have employed this mode. There are also some former commune enterprises which are using this mode to seek outside capital. The second kind consists of "integrated management with split stocks, with profits split according to shares, but no freedom to sell out of one's share." This is a method adopted by some former commune and brigade enterprises during structural reforms, with a few such enterprises permitting sellouts. A third type is one which has "voluntary investment in stocks with profits split according to shares, and with the stockholder assuming the risks and no guarantee of either equity or profits." This form is not that common. In most cases where it is used, the number of shares is small but the size of each share is very large. The major reasons why equity share associations have been able to proliferate is because they operate on principles of equality, mutual benefit and par value exchange. While protecting the interests of the property owner, they can fulfill the requirements of the association. Consequently, it is a form of economic association which easily garners mass appeal.

A second manifest characteristic of these economic forms is that they blend in with and interpenetrate one another. Comparing this to the "three-level ownership with the brigade as the foundation" of the past, today's economic forms appear in several different forms at several different levels, with you a part of me and me a part of you. This mutual blending and interpenetration basically falls into three types.

First, there is the merger through reform which melds one type into another, forming a new type of economic form. For example, the local cooperative economy which is based on the responsibility system and implements two-level management is actually a blending of the household economy into the former production team, resulting in further reforms.

Second, there is the case where two different economic forms interpenetrate each other by forming an association for joint management. This form at first was always an association for joint management of production and sales, of technology, or of industry and commerce. Later on in the process of development, the association becomes a closer one until an operation is formed which depends on both parties so that neither can go on without the other. Your property is mine, and vice versa. Some of the products you get are mine, and some I get are yours.

The third is the association which arises through production of a certain product, leading to the formation of a new economic form. An example is where production is dispersed in separate households while the company handles supply of raw materials and sale of products. The result of this kind of association is the formation of a new economic form which blends the collective with the household economy.

At the present time, the blending and interpenetration of economic forms is a trend developing rapidly with no retreats. Study of this form which relies on the traditional theory of tracing relationships between means of

production to decide the nature of ownership is futile. The diversified development of economic forms requires new theories to explain and encompass it.

A third characteristic of these economic forms is the regional nature of mutual impact and mutual constraints. From the point of view of a township or county, all economic forms appear to be developing and, as noted above, blending with and interpenetrating each other. But the rural village is China's basic rural social unit. Thus the village must be the level of scale used to analyze the interrelationship of economic forms. From the village point of view of observation, there are roughly three types of situation:

In one, the rural village enterprise (formerly commune and brigade enterprise) is comparatively well-developed and earnings by members of the enterprise are rather high. Since the enterprise has basically reached the point where it has absorbed the labor force of the village and solved the problem of excess labor, other economic forms outside the local cooperative economy remain rudimentary.

In the second, the village has an enterprise which is not too well developed, while other economic forms such as economic associations and specialized households are developing rapidly. Some village-run enterprises are shaky and not much of an attraction to the peasant. Consequently, a considerable amount of surplus labor gravitates toward specialized households and economic associations or else leaves to engage in labor service production elsewhere.

Finally, there is the village with a village enterprise which has developed somewhat or is run-of-the-mill, so that all economic forms are developing together, giving rise to a situation in which no household is strapped, everyone is actively working, there is mutual competition, and growth is flourishing. Many factors can lead to the formation of this type, the primary one being the fact that the village-run enterprise has not absorbed all the excess labor force, and some of the peasant population with the know-how, the spunk and the money, and not satisfied to take earnings from the village-run enterprise, take advantage of favorable transportation and market conditions to look elsewhere for development.

#### IV. Conceiving a Rational Arrangement of Various Economic Forms

Conceiving a rational arrangement of the various economic forms is the key to further intensification of reforms. To achieve this, the following four problems must be well solved:

First of all, guiding ideology for rational arrangement of economic forms must be clarified. The "Decision Regarding Reform of Urban Economic Systems" passed by the 3d Plenum of the 12th CPC Central Committee directs that "whether development of social productive force is benefited is the most important criterion for ascertaining the success and failure of all reforms." According to the spirit of this decision, the guiding ideology



for rational arrangement of economic reforms should be: Does it help to develop rural commodity production; does it help to mobilize the enthusiasm of the laborer; and does it help to promote free movement and new combinations among the various primary elements of production?

Second, the status and interrelationships between the different economic forms should be clarified to bring them fully into play.

The cooperative economy in its various forms is the current prevalent and widespread form of the socialist rural economy. Cooperative economies possess much of the rural means of production and almost all land and labor force. They shoulder the burden for most rural production by far. For this reason, they represent the major embodiment among the various economic forms.

New economic associations are a newly arisen force, some of which have now become cooperative economies, while most remain "hybrid economies." It is estimated that these will be developing rapidly en masse for a long time to come. In overall form they fall into the category of socialist economies, and constitute the economic form for peasants moving toward cooperative economies.

Peasant household economies are now mixing and interpenetrating with other economic forms under various economic guises. Among these, contract economies constitute one level of the local cooperative economy, while self-run economies independent of cooperative economies are also an economic form which falls within the purview of the cooperative economy. The self-run economy plays a beneficial ancillary role in the development of the socialist economy.

At the present time, the state-run economy leads the way. Various forms of cooperative economy provide the major embodiment. Individual economies and other economies which exist to a certain degree and within a specific sphere are supplementary. A blending and an interpenetration between various economic forms and an arrangement whereby they develop competition between one another is now in the initial stages of development in the countryside. Protection and development of this arrangement is a basic requirement for lively development of the rural economy as a whole.

A third area is that there must be a clear continuation of liberated ideology and an eradication of "left" influences, breaking away from the small peasant economic mentality and feudal conceptions of ancestry. This is a long-term task on the ideological front toward rational arrangement of various economic forms.

Lastly, a whole series of concrete policies and decrees which protect the rights and interests of the various economic forms and promote coordinated development with competition between the various economic forms must be researched and formulated. For example, reform decrees concerning establishment of shared equity enterprise, issuance of stock certificates, and stock exchange activities; decrees concerning cooperative



economies; decrees concerning operations which hire workers; decrees which protect the status, rights and interests of laborers, etc. In addition, the pace of reform for rural state enterprise units, administrative departments, supply and marketing cooperatives and credit cooperatives must be quickened to adapt to the needs of developing diverse rural economic forms, bringing out their leadership role, and strengthening state control and guidance in the larger picture over rural economic activities.

12303

CSO: 4007/344

NATIONAL

AGRICULTURAL TECHNOLOGICAL DISSEMINATION SERVICES

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL TECHNOLOGY] in Chinese  
No 2, Feb 85 pp 36-40

[Article by Chen Yueru [7115 2588 1172] and Liu Xiaofei [0491 2556 4869] of the Agricultural Economics Institute of the Chinese Academy of Agricultural Sciences: "Adapt to the New Situation in the Rural Areas and Set Up and Perfect the Agricultural Technological Dissemination Service System"]

[Text] After implementation of the output-related contract responsibility system, the orientation of the work of extending agricultural technology has been shifted from the communes and production brigades in the past to thousands and tens of thousands of households. The target of service has increased several dozen times. The technological facilities needed by the peasant households must serve the increase in both output and income. Thus, higher demands have been made on science and technology. The former technological service system is no longer able to meet the increasing desire of the broad masses of peasants to learn science, use science and demand high yields and good results from science. Thus, the establishment and perfection of an all-round agricultural technological dissemination service system has become a major issue.

The development of modern agricultural production relies primarily upon the dissemination of the results of scientific research and the popularization and application of new technologies. As a medium for scientific research and production, a technological service system will play a greater and greater role. This is because the agricultural technological dissemination service is an approach by which we convert the results of agricultural scientific research into realistic productive forces. Science is a latent productive force. Once applied in agricultural production and infiltrated in the important elements of the productive forces, such as the laborers, the laboring tools and the targets of labor, it can be converted into realistic productive forces in changing the agricultural outlook. In addition, the establishment of the agricultural technological service system will effectively bring into play the full function of the agricultural system, accelerate the pace of extending the results of scientific research, and bring about specific economic results. Furthermore, it can solve the problem of doing what one household cannot handle or doing what is not worthwhile when

handled by just one household, and promote the development of agriculture toward specialization, socialization and abundance.

We must set up an agricultural technological service system that enhances production and benefits the masses, that links scientific research with production, and that combines experimentation, demonstration, dissemination and training in that it has a base for experimentation, the means of demonstration, the factors for dissemination, and a site for training. It must take dissemination as the key and the county as the focus and fully exercise the role of existing technological strength and facilities in order to meet the needs of the household businesses and the peasant households in learning and applying science. In light of the current existence of various categories of technological service organizations, we feel that we should set up technological service organizations at several levels and combine them into a complete system and network. The actual form is roughly as follows:

I. Set Up a Service System with the State Agricultural Technological Extension Department As the Key

A. The county will set up an agricultural technological dissemination center. Agricultural production is the result of the comprehensive role played by such factors as soil, fertilizer, water, seeds and management. It involves many disciplines, such as planting, soil fertilization, plant preservation, seeds and water conservancy. The failure of any technological dissemination project to keep up with the others will affect the result of production increase involving the other technologies. Thus, the establishment of agricultural dissemination service centers by the county facilitates concentrating and coordinating scattered manpower, financial resources and material resources, more fully exercising the role of agricultural technological personnel in coordinating breakthroughs, and more fully utilizing the technological facilities. Central Committee Document No 1 of 1982 pointed out that we should "emphasize dissemination organizations at the county level, gradually integrate such agricultural dissemination organizations in technological dissemination, plant preservation and soil fertilization, implement unified leadership and division of labor through cooperation, and bring about the comprehensive application of various technologies in production." In this spirit, some counties have merged and reshuffled such units under the county agricultural department as the agricultural technological dissemination station, the institute of agronomy, the soil fertilization station, plant preservation and inspection station, disease and pest control station, agricultural technological training school and experimental and demonstration farms, and have set up an agricultural technological dissemination service center accordingly. Some have even included in the service center the county veterinarian station and the aquatic products company. As a county-level unit, the "center" has set up various categories of specialized technological service companies in light of existing technological capacity, implemented unified leadership and division of labor through cooperation, and integrated experimentation, demonstration, dissemination and training.

In addition, in the course of an all-round reform of the county-level system in a few counties, the concerned departments in rendering agricultural production services have become independent of the county-level organizations.

They are unified and formed into "two households and one body" service companies or "joint companies for agriculture, industry and commerce." Under these companies, agricultural companies or agricultural technological service companies are specially set up. This form coordinates the pre-production and post-production service work of the various links in agriculture, and is another aspect of the reform.

B. Agricultural technological stations at the county level and above are set up according to natural divisions or administrative divisions. Some counties have also set up specialized agricultural technological service stations in the production zones where there is a concentration on cash crops. These are organizations dispatched by the county "center."

C. The villages (communes) and counties have set up their corresponding agricultural technological dissemination companies (stations). Generally, with the village institutes of agronomy or plant preservation stations providing support, enterprise and professional units are organized under the original agricultural technological department to launch comprehensive services through division of labor and cooperation under the unified leadership of the companies. Agricultural technological service personnel are formed by the state agricultural technological cadres and the hired peasant technicians. Using economic methods to launch agricultural technological services, the professional units are gradually changed into enterprise businesses.

D. The administrative villages (production brigades) have peasant technicians who are partly divorced from production and who are recommended and assessed by and hired through selection among the outstanding peasants. In the economically-developed areas, or in the production brigades where the brigade is an economic entity, agricultural technological service stations are also established at the village level. The source of expenses is from collective withholdings or from subsidies by the village and township enterprises. Generally, services with compensation and sole assumption of one's profits and losses are implemented.

E. Scientific and technological demonstration households have been set up below the village level. The peasant technicians will first impart technology to them so that they will be ahead of others in serving agriculture with science and will play the role of taking the lead in demonstration and offering technological guidance.

The above-mentioned county and village service organizations have pooled the scattered technological personnel of the agricultural sector for the "center." This has solved the malpractices of the past of overlapping organizations, excessive division of labor, a lack of coordination in the work among the various units, and the failure to separate government function from technological service function. For instance, Ningdu County in Jiangxi Province has formed an agricultural technological dissemination center under the county people's government by pooling 46 agricultural technological cadres who were formerly under the agricultural and animal husbandry bureaus, the three farms and the one institute. Below the "center," four service companies in agricultural technology, seeds, plant preservation and livestock and



aquatic products, four bases (farms) for breeding and experimenting with improved varieties, and one training school have been set up. Twenty-six communes throughout the county have set up agricultural technological service companies, 340 production brigades have set up agricultural technological service teams, and the production teams have set up 3,300 scientific and technological demonstration households. The various levels have launched technological service work under the unified leadership of the "center."

## II. Civilian-Run Agricultural Technological Service Organizations

Because of seriously inadequate agricultural technological capacity in the country and the inability to meet the demands made by the development of agricultural commodity production on science and technology, collective economic organizations have raised funds on their own and peasant households have united to establish agricultural technological service organizations. For instance, the specialized organizations in irrigation, hot-house nurturing of seedlings, plant preservation, mechanized farming, silkworm cocoon cultivation, flowers and wood planting, animal and poultry raising and the breeding of aquatic products have organized the able personnel, farming scholars and indigenous specialists in the rural areas, and formed them into an effective service force and a force for technological development. As a result, we have been able to continuously bring into play the productive forces which have been formed by the collective economy through the years, resolving the problem of the lack of technology and lack of farm implements of the peasants without using state investment.

Some agricultural technological service projects are suitable to be run individually. For instance, agricultural technological specialized households have emerged, involving mechanized farming, the prevention and treatment of animal and poultry diseases, and technological contracting services in farming and breeding occupations. Using their traditional technical skills and specializations as well as their flexible service modes, they have joined the ranks of agricultural technological service beyond the limits of administrative divisions. They have gone beyond commune and county boundaries to wherever they are needed. They have offered convenience to the peasants and have supplemented the inadequate technological strength of the state and the collective.

In order to meet the needs of the various categories of specialized households in various aspects of science and technology, some counties and villages have established associations for specialized producers, such as the dairy cattle association, the chicken-raising association and the beekeeping association. These associations are mass organizations with specialized households as the mainstay. They adopt diverse means of propagating agricultural technology, which include organizing technological exchanges, providing scientific and technological news, launching technological consultations, and printing and distributing scientific and technological materials.

The birth of service organizations of diverse components and diverse forms has given peasants the opportunity to select the best services and has promoted competition among service organizations. As a result, service quality has also improved.



### III. Concerned Sectors Should Provide Agricultural Technological Services for Specialized Households and Assist Them in Developing Commodity Production

A. Some specialized companies of supply and marketing cooperatives are equipped with technicians in diversified undertakings who support the specialized households in developing commodity production. They render agricultural technological services such as providing seedlings and livestock for breeding, supplying and preparing farm chemicals and chemical fertilizers, jointly running production and processing bases for the raw materials for the agricultural products, providing agricultural technological guidance and technological contracting services, supplying equipment and materials needed in extending new technologies, and obtaining through contracts the agricultural sideline products required by the state.

B. In light of their more advanced technological equipment and technological strength, the state-run farms or joint agricultural-industrial-commercial enterprises should, together with the agricultural production units and specialized households under the system of collective ownership, jointly run bases for producing raw materials for agricultural products, such as planting orchards, developing fish breeding ponds, and rearing dairy cattle. They should provide improved breeds as well as the technology for preventing and treating diseases, and for breeding and catching aquatic products. They should institute technological contracting and consulting services, or impart technology through such means as technological shareholding and technological transfers.

C. The agricultural products processing factories of the village and township enterprises should establish a fixed cooperative relationship with the specialized households through the use of contracts. The village and township enterprises will supply technological guidance, organize the supply of improved seeds, livestock for breeding, and the means of production. The specialized households will supply the raw materials necessary for processing for the processing factories.

The above-described agricultural technological service organizations take the state agricultural technological dissemination organization as the main body, the county agricultural technological dissemination center as the center and the village agricultural comprehensive technological service company as the foundation. Diverse economic forms and diverse business modes operated jointly by the state, the collective and the peasant households, or individually by the specialized households in agricultural technological service, coexist to form a multi-level technological service network which takes the agricultural scientific and technological personnel (including the peasant technicians) and the scientific and technological demonstration households as the core, linking the county up and down and left and right, and implementing rational division of labor as well as coordination. The first level of this service system is the county agricultural technological dissemination center, which primarily emphasizes the building of the dissemination system and rank; the experimentation, demonstration, dissemination and comprehensive technological application of new technologies; and the training and scientific popularization and propaganda for the county and village level technological core. The second level is the district and village agricultural technological

dissemination service company (station), which is primarily responsible for the agricultural technological guidance and technological service of the districts and villages. In the form of contracting, it provides technological service to the agricultural producers and guides and trains peasant technicians and scientific and technological demonstration households. The third level is the village peasant technicians, whose primary tasks are to carry out experiment and demonstration on the contract fields, do a good job of technological contracting, propaganda, popularization and dissemination of science and technology. The fourth level is the scientific and technological demonstration households. They are both the producers directly involved in agriculture and the demonstrators and disseminators of new technology. They are the supportive force which delivers science and technology to thousands and tens of thousands of households.

The technological services of various levels inside the system occupy different territorial sizes, but are beginning to go beyond their territorial limits. One level not only launches agricultural technological service for the lower level inside the system, but also directly serves the agricultural production units, although the focus of work differs.

To solve the problem of organization, we must also have a scientific method. Agricultural technological service aims at extending new technology. We must take experiment as the basis for dissemination, create models for demonstration in dissemination, and train skilled personnel for dissemination, so that we can attain the goal of increasing output and income through providing technological service for the peasant households. For this reason, we must, under the unified leadership of the service center, formulate agricultural technological measures, promote cooperation and coordination among the various sectors and various specializations inside the system, and apply agricultural technology comprehensively in production. At the same time, we must coordinate with the household contract responsibility system and adopt service methods which are welcomed by the peasant households.

1. Set up a comprehensive agricultural technological demonstration model and organize specialized technicians to provide multidisciplinary cooperative services. The county and village technological service organizations should first carry out experiments on the technology to be disseminated at the experimental site, fix such comprehensive technological measures as the nurturing of crops, the substitution of improved varieties, the scientific application of fertilizers and the nurturing of high-yield crops for that area, then extend these measures to the peasant households in the form of technological services, so as to attain the economic results of comprehensive technological measures which involve little investment, low cost and fast results.

2. Institute agricultural technological contracting. The agricultural technological contract responsibility system is a new thing which appears in conformity to the responsibility system in agricultural production. Using economic methods and the form of contracts, it closely links together the responsibilities, rights and interests of agricultural technological personnel with those of the production units and masses of peasants and adapts technological results to the economic interests of the masses. It has

overcome the malpractice of eating out of the "same big pot" in the work of dissemination and has mobilized the enthusiasm of scientific and technological personnel in extending technology and the peasants in applying science and technology. It is a new approach to extending agricultural technology. It consists primarily of the following three specific methods: (1) Joint production and profit-sharing in technological contracting. The contractor is responsible for the entire process of comprehensive technological guidance for the crops under contract: An output quota is fixed. The profit of the surplus portion is shared proportionately as stipulated. Compensation is made for reduced output as stipulated. (2) Fixed-quota, fixed-remuneration technological contracting: The contractor is responsible for the technological guidance of the contracting project. When he reaches the stipulated output quota, he will draw a stipulated amount of remuneration. If he does not reach the fixed quota, he will not receive remuneration. But compensation is not necessary unless there are technological mistakes or a serious reduction of output. (3) Technological contracting that links results to quality: This means linking both product output and product quality. Whichever form we adopt, we must, in implementing contracts, adhere to the principle of "voluntary participation by both parties, service with compensation and rational reward and penalty," share economic responsibilities and enjoy mutual economic benefits.

Generally, we should first extend those single-item technological projects with remarkable results before developing in the direction of complete sets of technological contracting. The scope of technological contracting can involve a crop or a specialized project, and can also involve diverse crops or diverse projects. One can contract one season, and one can also contract the whole year or several years. The contractors include state agricultural technological cadres, peasant technicians, and scientific and technological specialized households. One can carry out contracting individually or jointly. In technological contracting, the agricultural technological personnel should handle properly the relationship between technological guidance over a large area and technological guidance over a small area, and must leave most of the benefits from the increase in output and increase in income to the peasants. In profit-sharing and in the distribution of technological guidance fees, we must implement the principle of distribution according to work, and must reward the contributing technicians and agricultural technological service specialized households.

3. Institute multilevel and multiform technological training. With the development of diversified undertakings and commodity production, the peasants demand more technological service projects and are very selective in the technology. After they have mastered some technologies through contracting, they again put forth demands for new and better technologies. Thus, we must strengthen the technological training of the state agricultural technological cadres and peasant technicians, and enable them to specialize in one field and know several others and to have practical operating skills, and to continue to update their knowledge.

We not only need agricultural technicians to disseminate scientific and technological results and new technologies, but more importantly, we must enable the broad masses of peasants to master and use those results and



technologies. Thus, we must expand the target of training from the basic-level cadres to the scientific and technological specialized households, the demonstration households, farming experts and educated young people. We must combine systematic training with specialized training, with emphasis on the latter. We must combine long-term training with short-term training, with emphasis on the latter. We must combine centralized training with decentralized training, with emphasis on the latter. We must combine lectures with on-the-spot visits and practical operation. In training, we must learn from one another, let those who are able be the teachers, and fully exercise the role of the technicians and the indigenous specialists among the peasants. In those places that are properly equipped, we must organize agricultural technicians to participate in study in the Central Agricultural Broadcasting School, and, in keeping with local conditions, operate agricultural technological schools, technological evening schools and sparetime agricultural schools at various levels. In addition, we must combine training at fixed intervals with interim training. Primarily in light of the needs of the farming season and production, we must master whatever we disseminate so as to attain the most practical results. We should attain the goal of training one, bringing along a group, and promoting an area, train people to become experts who can achieve truly high yields, train a core which can disseminate new technology, and train teachers from whom the peasants can learn technology. We must truly treat training work as an important means of agricultural modernization.

4. Make use of diverse forms to launch scientific popularization and propaganda on a broad scale. Various places have created many effective measures, such as popularly utilizing radio broadcasts, holding technological forums and technological report meetings, printing and distributing scientific and technological materials, compiling and publishing "agricultural technological news in brief," organizing the subscription of "small-sized scientific and technological papers"; running blackboard, newspaper, wall posters, and "technological advertisement" postings; showing scientific and educational films and slides; convening on-the-spot meetings, and organizing visits to demonstration models; setting up technological consulting offices (stations); and organizing agricultural technicians to attend fairs, holding "scientific popularization fairs" and technological consultations, and exhibiting scientific and technological results. We should use those forms that the peasants are happy to see and find easy to accept to propagate and popularize agricultural technological knowledge.

5. Take technological service as the key and at the same time handle the materials and machines needed for disseminating technology. The various types of agricultural technological dissemination service companies in many places have adopted the method of supplying what they disseminate and have solved the problem of inconsistencies between technological dissemination and material supply by providing the material guarantee for extending new technologies. This is a very good method. For instance, the seeds company implements the "chain" operation of seed production, procurement and sales. The plant preservation company handles the new farm chemicals which are not supplied by the sector which supplies the means of agricultural production, managing the retail sales of farm chemicals, the supply of chemical application machines, fuel, ground covers, and growth stimulants, and the leasing and maintenance of

chemical application machines. The livestock and veterinarian service company runs hatcheries, brooding, mating, rearing, insurance, and sales of improved-variety livestock, eggs for hatching and drugs for animals. We have developed from simple technological services to operations involving supply of complete sets of materials, and have expanded our production realm into the realm of circulation and service. Under the prerequisite of taking technological dissemination service as the key, we have combined technological dissemination with business. This has not only offered convenience for the peasants and accelerated the process of converting science into a productive force, but has also accumulated funds for extending technology and created the necessary factors for making an agricultural technological service organization an economic entity.

The counties which have already set up the agricultural technological dissemination service system have played a greater role in promoting the two conversions in agriculture. However, some problems remain which must be resolved as soon as possible. They are the problem of funds, the problem of materials supply, the problem of training a technological rank and file, the problem of coordination among the service organizations at various levels, the problem of overcoming the weak links in the technological service centers, and the problem of developing the scope of service from cultivation to the diversified economy. We must continue to study and resolve these problems.

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CSO: 4007/317



NATIONAL

#### PROGRESS IN RECLAIMING SALT-AFFECTED SOIL

OW151101 Beijing XINHUA in English 0734 GMT 15 May 85

/Text/ China has reclaimed more than 3.5 million hectares of saline and alkaline soils in the past 30 years, thus giving an impetus to agricultural production, according to the Ministry of Agriculture, animal husbandry and fisheries.

Of China's 130 million hectares of arable land, seven percent is saline or alkaline soils.

A senior official at the ministry told XINHUA today that after more than 30 years of hard work by scientists and farmers, the salt-affected soils in the North China plain have been reduced to 1.5 million hectares from 3 million hectares in the early period of the 1950's, and the grain output has increased to 76.25 million tons from 28.9 million tons. Ginned cotton has increased to 2.5 million tons from 0.4 million tons, during the same period.

In northwest and northeast China, 2 million hectares of saline and alkaline soils have also been improved during the period.

He said the central government has invested an equivalent of more than US\$10 billion in soil reclamation in the North China plain alone in the past 30 years.

The North China plain is one of the major plains in the country, covering about 300,000 square km. However, it has long been seriously affected by drought, waterlogging, salinity and alkalinity. As a result, the grain output has been low. The comprehensive reclamation of the salt-affected soils has been listed as one of the key scientific research projects at the state level since 1978, and 12 experimental reclamation zones have been marked out according to different natural and agricultural conditions.

In order to promote the reclamation work, the ministry has signed a long-term loan agreement with the World Bank and the Agricultural Development Foundation of the United Nations, he added. Starting from 1983, allround control work has been conducted on 200,000 hectares of salt-affected soils in 11 counties of the North China plain.

To plant rice to improve the soil is one of the measures developed by Chinese scientific workers in the past few years. They promote irrigation systems to control ground water level, and plant rice to desalt the groundwater. As a result, the salt content in the soil has decreased yearly, while grain output continues to rise.

CSO: 4020/241

NATIONAL

# FISH OUTPUT UP IN 18 PROVINCES, MUNICIPALITIES

OW020904 Beijing XINHUA in English 0848 GMT 2 Jun 85

/Text/ China's fish output in 18 major provinces and municipalities in the first quarter of this year was 937,000 tons, 70,000 tons more than the same period of last year, the aquatic product bureau of the Ministry of Agriculture, animal husbandry and fisheries said.

There are now 4.89 million peasant households that take up fish raising, producing 157,000 tons of fish last year. In addition, 378,000 households specialize in fishing and their total catch was 282,000 tons last year.

Last winter and spring, more than 200,000 hectares of fish ponds were dug and rice paddy fields used for raising fish has come to 553,000 hectares.

The ministry officials said that there were great potential for fish production in China.

Only 20 percent of the over 1 million hectares of coastal waters are now being used to raise fish and only 3 million of the 5 million hectares of freshwater surface are being used.

If these resources are utilized, fish production in China would be greatly increased, the ministry said.

The state has adopted measures to check over catching of fish in offshore waters and creating conditions to develop oceangoing fishing.

So long as we persist in the effort, said She Danu, deputy director of the aquatic product bureau of the ministry, we can certainly achieve the goal of solving fish supply problems in major cities in 3 to 5 years time.

The fish supply situation in Guangzhou, Wuhan and Anhui has much improved, he said. In Guangzhou, fish used to be very difficult to get and the prices used to be among the highest in the country. But, there are ample supply in the city now. The most popular grass carp which used to be 6 yuan a kilogram has now dropped to 2.8 yuan. Last year, the city supplied Beijing and other parts of China with 13,500 tons of fish and another 5,000 tons were sent to Beijing and other cities in northern China in the first quarter of this year. Before the control on the fish price was lifted, the city produced only 7,250 tons of fish. But last year, the fish output soared to 62,350 tons.

NATIONAL

TOBACCO TO INCREASE PROFITS, IMPROVE QUALITY

HK230631 Beijing CHINA DAILY in English 23 May 85 p 2

[Article by staff reporter Zhao Jinming]

[Text] China's tobacco industry plans to increase its profits 40 percent by 1990 and diversify production toward lower tar cigarettes.

Tobacco is a government monopoly in China, and like most countries, China finds itself at cross-purposes on the subject.

From the standpoint of health, the state is trying to discourage cigarette smoking. From the standpoint of revenue and public demand, the state is trying to increase production.

The Seventh 5-Year Plan which begins next year, calls for the industry to deliver profits and taxes of 70 billion yuan to the state, a 40-percent increase over the goal set in the current 5-year plan.

Last year China produced 1.4 million tons of tobacco and 21.3 million cases of cigarettes, paying 10.8 billion yuan to the state in taxes and profits. An estimated 300 million Chinese smoke.

The China National Tobacco Corporation, which oversees 20 provincial tobacco companies and more than 1,500 tobacco factories, handles 80 percent of the nation's cigarette production and sales and tobacco leaf purchases.

Corporation General Manager Li Yisan said despite respectable gains, the industry is still beset by management and equipment problems.

Over the past 3 years, the industry has undergone a shakeup in management.

More than 300 inefficient small cigarette factories were closed and tobacco trade centers were set up in the cities of Beijing, Shanghai, Tianjin and Shenzhen to balance shortages and surpluses of tobacco products. At the same time, production of homemade cigarettes and illegal tobacco trading have been banned everywhere, Li said.

The tobacco industry is keenly aware of its double-edged role. While seeking to increase its contribution to state revenues, the industry is also sensitive to public health, Li said.

In recent years, cigarette researchers and producers have placed greater emphasis on low-tar, filtertip cigarette reduce the health risks of cigarette smoking, he said.

For example, the Beijing cigarette factory is producing low-tar cigarettes under the Jin'ian brand. The cigarettes, which contain a Chinese medicinal herb, are reported to have a soothing effect on the lungs.

Tar levels of Chinese cigarettes generally exceed those of foreign brands and popular filter-tip cigarettes account for only 10 percent of total production, the corporation general manager said.

The industry is also crippled by obsolete production equipment and an inadequate number of technical specialists in its workforce.

To solve the problems, the corporation will adopt following measures:

- Improvement of tobacco leaf quality through scientific research.
- More efficient use of raw materials and reduction of production costs.
- Increased emphasis on high-quality cigarettes with fancier packaging.
- Introduction of advanced technology and equipment to update existing factories.
- Development of new products and expansion of product exports.
- Training technical personnel and boosting their numbers from one percent to five percent of the total workforce.

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## NATIONAL

## BRIEFS

**DROP IN TEA HARVEST**--Abnormal weather has resulted in a drop in China's spring tea harvest this year and high-grade tea is in short supply, according to a national meeting now in progress here. Representatives from the producing areas reported that there was a spell of low temperature and excessive rain in March, a dry spell in April and high temperature in May in Zhejiang and Anhui provinces, China's main tea-producing areas. The tea bushes sprouted late but grew too quickly. As a result, tea picking started 10 days later than usual and the output of high-grade tea dropped. In April, raw tea purchased by commercial departments dropped 60 percent compared with the corresponding period of last year, and purchasing prices had to be raised. Big increases have been reported in the prices of high-grade teas; that of the famous Longjing (dragon well) tea has more than quadrupled. At the same time, tea stocks throughout the country have dropped dramatically. According to experts here, the drop in production may affect China's exports. Last year, China exported 139,300 tons of tea, accounting for 12 percent of the world's total trade, next only to India and Sri Lanka. /Text/ /Beijing XINHUA in English 0906 GMT 14 May 85/

**NEW TOBACCO SOCIETY**--The China tobacco society was founded here today, with more than 140 tobacco experts, technicians and managerial personnel from 28 provinces, municipalities and autonomous regions, as well as Hong Kong, attending the inauguration. State councillor Zhang Dingfu said at today's meeting: "the founding of the China Tobacco Society will bring together scientific and technical workers concerned with the tobacco industry in the fields of agriculture, commerce and academia all over the country for the promotion of the tobacco industry." Li Yisan, general manager of the China Tobacco Corporation, said, "tobacco products have a special effect on the health of the people. Development of lowtar cigarettes will be one of the key subjects of research of the new society." Chinese herbal medicines have been successfully incorporated into cigarettes, he said, and some brands have even been exported to Japan. China has more than 140 cigarette factories, producing more than 106 million cigarettes (ranking first in the world) for more than 200 million smokers. Since September 1983, the China Tobacco Corporation has been made responsible for the production and marketing of tobacco products throughout China and for tobacco exports. Some 300 substandard cigarette factories have been closed down. Sales of hand-rolled cigarettes are now illegal. /Text/ /Beijing XINHUA in English 1603 GMT 20 May 85/

AGRICULTURAL TAX REFORM--Peasants in most parts of China will start to pay their taxes this year in cash instead of grain, according to the Ministry of Finance today. The new policy makes it more convenient for peasants, who are increasingly turning to various kinds of commodity production rather than farming, to pay their taxes, according to a ministry spokesman. With the expansion of the rural commodity economy, the practice of paying taxes in grain has become outdated, he said. The agricultural tax-in-kind, introduced in the liberated areas before liberation, suited to a small-scale farming economy undertaken mainly for the subsistence of the producer, the ministry spokesman added. /sentence as received/ While abolished in most parts of the country, he said, it will still be applicable in some economically backward areas. /Text/ /Beijing XINHUA in English 1455 GMT 23 May 85/

TEA SALES INCREASE--China sold 8.6 percent more tea in the first 4 months of this year than in the same period of last year, the PEOPLE'S DAILY reported here today. The paper says that the country produced 411,000 tons of tea last year, registering a 2.6 percent rise over the 1983 figure. In the same period, exports registered 139,000 tons, up 4.5 percent over 1983. According to a recent national tea information network conference, the brisk sales of tea resulted from recent efforts to expand the domestic market, especially the rural market. Tea producers estimate that the spring tea harvest this year will be a bumper one, despite unseasonably cold spring weather. /Text/ /Beijing XINHUA in English 1432 GMT 22 May 85/

RURAL AREA COOPERATIVES FLOURISH--Almost half a million rural cooperatives have sprung up over the past 4 to 5 years as economic reforms have forged ahead, the state statistical bureau said today. Latest figures show that at the end of last year, there were 467,000 such cooperatives in the countryside, employing 3.55 million people, and with total fixed assets of 3.3 billion yuan. All these cooperatives have been formed voluntarily by individuals and small businesses, who have pooled resources to counter keen competition, said a bureau official. Most of the joint enterprises--about 58 percent--are concerned with industry, construction, transport, commerce and service trades. The others deal with agriculture, forestry, animal husbandry and fisheries. Of total gross income last year, 62.8 percent was earned by industrial and construction cooperatives, 27.1 percent by the service sector and only 10.1 percent by agricultural co-ops. Pretax profits came to 3.9 billion yuan. About 9 percent of this went to the state in taxes, 9.8 percent to the collectives as accumulation funds and the rest was paid to individual workers, averaging about 1,100 yuan per person. The bureau official said that more than 60 percent of the rural co-ops were distributed in the coastal regions. He said it was necessary to encourage the peasants to cooperate more in forestry, animal husbandry and agricultural and sideline processing industries to provide more meat, milk, poultry, eggs and fruit for urban areas. /Text/ /Beijing XINHUA in English 0809 GMT 23 May 85/

RECORD HIGH SUGAR PRODUCTION--China's sugar output reached a record 4.25 million tons during the 1984-1985 refining season, 700,000 tons more than last season, the Ministry of Light Industry reported today. The sugar output in Guangdong, Yunnan, Gansu and Shanxi Provinces, and the Guangxi, Inner Mongolia, Xinjiang and Ningxia autonomous regions hit an all-time high in 1984-1985. The figure for cane sugar in south China was 760,000 tons more than last season, but the production of beet sugar in the northeastern provinces of Heilongjiang and Jilin, China's major sugar beet producers, dropped by 8.5 percent due to adverse weather conditions. /Text/ /Beijing XINHUA in English 0736 GMT 30 May 85/

LACK OF STORAGE FACILITIES--China's production of grain, cotton and fruit has soared in recent years--bountiful harvest but no place to store them. To address the shortage, the country has pledged an additional 4 billion yuan to finance a storehouse construction program. The CHINA COMMERCIAL JOURNAL reports that the nation last year constructed warehouse capacity for 9.3 billion kg of grain, 125 million kg of cotton and 20,000 tons of fruit. But new storage facilities failed to keep pace with growing demand. At a joint conference last month of the Chinese National Planning Commission and the Ministry of Commerce in Nanjing, participants said location of new storage facilities should be determined according to local production levels of grain, cotton and fruits. Granaries and cotton storehouses should primarily be built at harbors and transportation hubs, the conference said, while fruit warehouses would be better located between orchards and fruit processing factories. The state is urging provinces and cities to erect durable small and middle-sized storehouses. Regulations require use of steel plates and reinforced concrete in the construction. The conference also said that emphasis should be placed on expansion and reconstruction of existing storehouses. According to the newspaper, the state this year will not invest money in storehouse construction below the county level. Individuals and businesses at the township and village levels will be encouraged to raise their own funds for construction. /Text/ /Beijing CHINA DAILY in English 22 May 85 p 2/

FLOATING WATERWORKS FLEET DOUBLES--China is doubling the size of its fleet of floating waterworks, an official of the North-west Public Utility Design Institute said here today. The 13 put into operation since 1981 have proved to be a cheap and effective way of providing drinking water to the densely-populated banks of rivers and lakes in central and eastern China. Now about a dozen are under construction, the official said. Designed by the institute in collaboration with 10 other units, the vessels can produce between 500 and 50,000 tons of clean water a day. Floating waterworks are much cheaper and quicker to build than land-based ones, and do not take up valuable farmland. /Text/ /Beijing XINHUA in English 0746 GMT 26 May 85/

PROGRAM ASSESSES FOREST RESOURCES--A computer program has been developed in China to ascertain forest resources by deciphering satellite images, GUANGMING DAILY reports today. Designed by the Chinese Academy of Forestry Sciences, the program can distinguish forest types, estimate timber reserves and make maps. Experiments on 208,000 hectares of forest in Jilin Province last year showed

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that the accuracy rates of forest classification and reserve estimation were 88.6 and 91.9 percent respectively. The forest distribution map drawn by the program tallied with aerial photos and exhaustive surveys. Satellite surveying is much cheaper and more efficient than the conventional method, experts told a recent assessment meeting. China now uses satellite data in agriculture, water conservancy, geology, energy, transport, environmental protection and city planning. /Text/ /Beijing XINHUA in English 1152 GMT 29 May 85/

FISH, SHRIMP BREEDING BOOM--The number of rural households and cooperatives specializing in fish and shrimp breeding has doubled to 2.34 million since 1983, thanks to government encouragement, the WORKERS' DAILY reported today. Nearly 4.9 million peasant households are also engaged in fish breeding as a sideline occupation--a 38 percent increase over last year. Fish are now being bred in nearly 560,000 hectares of paddy rice fields all over the country, about 117,000 hectares more than 7 years ago. New fish ponds totalling 200,000 hectares were created across China between last winter and this spring, the paper says. The same period saw 6,700 hectares of fish and shrimp ponds opened in Fujian Province alone--more than the total area for the past 35 years. Since 1979, 1.2 million rural households in Anhui Province have switched from farming to fish raising, increasing the breeding pond surface to 400,000 hectares from 260,000 hectares. The paper says that China has broad prospects for the development of aquatic products, as only 14 percent of its 1.33 million hectares of coastal shallows has been utilized. In addition, inland waters suitable for fish breeding amount to 5.6 million hectares, with only 54 percent developed so far. /Text/ /Beijing XINHUA in English 1043 GMT 29 May 85/

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TRANSPROVINCIAL AFFAIRS

RURAL COMMODITY PRODUCTION CHANGES YAO LIFE

OW010912 Beijing XINHUA in English 0754 GMT 1 Jun 85

/Article by staff correspondent Huang Yanglue/

/Text/ Rural commodity production now being encouraged to eventually replace the traditional small farming economy, is changing the life of the ethnic Yao group, who for generations has regarded trading as a trick to earn dishonest money.

The Yaos, who live deep in mountains in Guangxi, Guangdong and other parts of southern China, are beginning to produce for the market.

One example was provided by two brothers in a mountain village in Guangdong Province who made a fortune last year by trucking fir barks to cities for building material.

This inspired their folks to look beyond the high mountains, local officials told XINHUA.

Slash-and-burn used to be the prevalent farming method in some Yao communities.

Though life has improved since 1949, the road to prosperity is still a mystery to many, who stick to their traditional way of life and mode of production, considering them perfect.

But in Guangdong Province many others are beginning to change their minds under the shock wave of new prosperity radiating from the Zhujiang Delta, 200 km to the south, where people are producing more and more for the nearby Hong Kong and Macao.

The two brothers in northern Guangdong's Liannan Yao autonomous county are among the first to look outside the mountains for a new and better life, officials said.

Many fellow villagers have followed their lead and bought trucks and hand-tractors to transport goods for sale, while others develop commodity production by planting fruit trees on hill slopes.



Another Yao peasant, Fang Dahuo, introduced electrical incubation of duck eggs. His ducklings, with their higher survival rate, attracted many buyers from nearby counties.

With more money in their pockets, the Yaos are beginning to feel dissatisfied with their old ways and seek a more prosperous and enjoyable life.

More than 50 of the 68 families in Dongtian Village in Ruyuan Yao autonomous county built new houses last year, deserting the small thatched huts on mountain slopes, which they had inhabited for generations.

Electric fans, tape-recorders and TV sets are also becoming commoner in Yao homes.

Evening in Yao market towns now see youngsters in threes and fours swarming into cinemas, parks and other places of entertainment, girls in Yao-style skirts and boys in Western clothes.

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TRANSPROVINCIAL AFFAIRS

LOCAL PRIORITIES SET

Beijing NONGMIN RIBAO in Chinese 22 Feb 85 p 2

[Article: "Different Localities Prioritize Agricultural Structural Readjustment"]

[Text] I. Sichuan

1. Reduce grain crop area and expand industrial crop area. Develop paddy rice, wheat and other grains which have a higher economic value and industrial crops such as oil materials, sugar canes, tea leaves, fruits, etc.

2. In animal husbandry, stress developing domestic fowl, cattle, sheep and rabbits; stabilize the breeding quantity of live hogs, raise the rate of shipping of pig pens and set a target of increasing the supply of pigs by 2 million head a year. Use rivers, ponds, reservoirs, pools and irrigated fields to raise fish and build up marketable fish bases.

3. Make town-township enterprises into collective enterprises, combined enterprises and family enterprises of the industrial type, commercial type or service type. Emphasize the food industry and fodder industry at this moment.

II. Shaanxi

In planting, plan to readjust the ratio of industrial grain crops and forage crops from the present 85:10:5 to 70:15:15 in 1990 and 60:20:20 in 2000.

In animal husbandry structural readjustment, stress transferring raw-material animal husbandry into processing animal husbandry. First, pay attention to the construction of the forage industry so as to raise the production of mixed fodder from 200 million jin at present to 1 billion jin within 2 to 3 years. Second, pay attention to the base constructions for hot-selling products, i.e., Guanzhong Qinchuan cattle, milch goats and north Shaanxi sheep's wool and down bases. Third, pay attention to planting grasses.

III. Heilongjiang

The fields sown for fine grains and industrial crops have been expanded this year. Paddy rice fields increased from last year's 4 million mu to 5 million mu this year. Wheat fields increased from 29 million mu to 32 million mu.

#### IV. Guangxi

The plan this year is to reduce the grain fields from last year's 31 million mu to 25 million mu this year and to expand industrial crop fields from 8 million mu to 14 million mu. Two million mu of the lands which were withdrawn from sowing and returned to afforestation will be used to develop economic forests such as tun oil trees, oil tea camellias, star anises, cassiabark trees, longans, litchis, oranges, tangerines, etc. and fruit trees.

#### V. Hebei

Reduce cotton- and corn-sowing areas but expand dry rice, cereal, peanut, soybean, vegetable and fruit planting areas. It is estimated that this year the total grain harvest will be 40 trillion jin and that the total cotton yield will be around 13 million dan. The cotton varieties have been switched over to Ji Cotton Nos 7 and 8. Mixed fodders may come up to 3.3 billion jin, for more than a four-fold increase over that in 1984. The total output value of the town-township enterprises may double that of previous year and may reach 20 trillion yuan.

#### VI. Shandong

The provincial government decided to reduce the cotton fields from last year's 25 million mu to 20 million mu this year. The fields cut down will be switched over to grow such industrial crops as peanuts, bluish dogbanes, melons, fruits, vegetables, etc. Grain fields will hold to above 65 million mu. Elevate the proportion of wheat yield from 40 percent at present to over 50 percent in the total grain harvest.

#### VII. Shanghai

Reduce 300,000 mu of cotton fields and expand 200,000 mu of rapeseed fields. The triple-cropping system will go down from 74 percent to 47 percent and the double-cropping system will go up from 26 percent to 53 percent. Develop erleng wheat and japonica rice. Cancel the state purchase program for Lu Cotton No 1 and Zhong Cotton No 10. In non-staple food production, stress developing delicate varieties of vegetables, lean-meat type pigs, red-shell eggs and chickens, etc.

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TRANSPROVINCIAL AFFAIRS

BRIEFS

NEW PIG-BREEDING CENTERS PLANNED--China is adding 26 more country-based centers to raise lean porkers this year to meet rising demand, the PEOPLE'S DAILY reports today. The new centers, to be built in major pig-breeding provinces of Zhejiang and Hunan, will bring the nation's total to 44, the paper says. It praises Zhejiang and Jiangsu provinces as pacesetters in lean pork production. Zhejiang supplied 5 million head of lean porkers in 1984, a big increase over the year before. Jiangsu will market over 2 million this year, or 10 percent of its total number. This represents a 67 percent jump over last year figure of 1.2 million head, 80 percent of which were provided by 6 counties administered by Suzhou city. The increase is due largely to extensive artificial insemination of fine lean breeds and higher purchasing prices. "Higher purchasing price is crucial to rapid expansion of lean pork production," states an accompanying commentary of the PEOPLE'S DAILY. Peasants should be encouraged to specialize in raising lean pigs and helped with insemination and supplies of fodder and piglets, it adds. A lean pig contains at least 45 percent lean pork. /Text/ /Beijing XINHUA in English 0823 GMT 25 May 85/

FISHING BECOMING POPULAR--Thousands of peasants in Shaanxi and Qinghai provinces have swapped ploughs for fishing nets over the past few years, according to provincial officials. Peasants who rarely raised and ate fish in the past are now finding their fortunes in fishing. In Shaanxi, there are now more than 20,000 peasant families specializing in fish farming. Last year, they caught 2,600 tons of carp--60 percent more than in 1983--and 23 specialized households on the outskirts of Hanzhong city earned an average of 1,900 yuan each. Shaanxi peasants enjoy long-term use and hereditary rights over the ponds they have dug



on waterlogged and alkaline land. The province has 40,000 hectares of such land available. A carp-breeding center was set up last year, providing 4 million fry for locals to raise. Peasants in chilly Qinghai, where fish-raising used to be considered impossible, began trying it out for the first time last year, digging small ponds and contracting small reservoirs. This followed the success of state-run fisheries set up recently in the Qaidam Basin. /Text/ /Beijing XINHUA in English 1525 GMT 18 May 85/

CSO: 4020/241

ANHUI

# CHALLENGES IN CIGARETTE MAKING DESCRIBED

Hefei ANHUI RIBAO in Chinese 27 Feb 85 p 2

[Article: "Improvement in Quality and Quantity of Flue-Cured Tobacco Urged"]

[Text] Faced with severe challenges and competition, the tobacco trade in our province must "raise the quality of flue-cured tobacco to win a victory through good quality and excellence and strive for its continued existence and development." This was the central subject under discussion at the provincial tobacco leaf production work conference convened from 6-8 February.

The tobacco trade in our province has improved rapidly in recent years. Four big strides were taken in 4 years and economic returns increased conspicuously. Taking the 1980 figure as the base, from 1981 to 1983 the total output value reached 2.573 billion yuan, the net increase was 860 million yuan, an average growth rate of 20 percent a year. Profit taxes (not including the tobacco leaf tax) amounted to 1.574 billion yuan, the net increase was 587 million yuan, an average growth rate of 21.45 percent a year. In addition, the monopoly made profits of 362 million yuan. The output value in 1984 had a new breakthrough and reached over 1.077 billion yuan. The taxes (including the monopoly profit tax) levied were over 840 million yuan and accounted for more than one-third of the entire province's financial revenues, ranking first among all trades in our province. The development of new products also was successful. Medicine cigarettes known as "apocynum venetum," "salvia miltiorrhiza" and "eupatorium fortunei" are reputable both at home and abroad.

However, along with the rapid promotion of tobacco production all over the country, tobacco leaf production in our province is confronted with such problems as an oversupply of inferior-standard, unrefined-quality and low-grade tobacco leaves. Our province has 1.5 million dan of low-grade tobacco leaves at the moment, some of them already having been stocked for 3 years. Low-grade tobacco leaves constituted about 40 percent of state purchases last year. The major reasons for this case are an unrationable layout of tobacco planting, inexperienced production management in individual tobacco regions, backwardness in techniques, the attitude of "eating from one big pot" in purchasing flue-cured tobacco, etc. If this situation keeps going on, the production of flue-cured tobacco in our province is in danger of being eliminated; this will then influence the production of the cigarette-making factories and seriously imperil this very important economic mainstay.

For the sake of reinforcing the power of competition, the guiding ideologies this year in our province for flue-cured tobacco are to map out planting, stress quality, make proper arrangements, expand the markets and increase returns. The conference suggested four measures to lift the quality of flue-cured tobacco: (1) Readjust the layout of planting flue-cured tobacco. (2) Firmly popularize fine seeds. (3) Make great efforts to promote a scientific tobacco-growing standard. (4) Insist on and augment flue-cured tobacco production and purchase contracts and change the previous method of eating from "one big pot" that purchased everything in a package whether good or bad. (5) Realistically strengthen leadership on the work of flue-cured tobacco.

12756

CSO: 4007/261

ANHUI

#### BRIEFS

YOUNG RUN MORE FARMS--Scientific knowledge and pioneering spirit have helped 370,000 young people replace their parents in running family production and other affairs in Anhui province, local officials said today. This used to fall to the oldest generation for their supposed experience. The figure, given on the basis of a recent survey by provincial authorities, indicates that the policy of building up a market-oriented rural economy is giving the young the chance to show their superiority. A girl, 22 in Feixi county increased the dozen varieties of flowers developed by her father to 58 by applying what she learned from college textbooks and academic papers. She earned over 20,000 yuan from one deal for 100,000 flowers last autumn, officials said. Her father, a primary school graduate, let her have the final say in growing and selling. Sticking to the land to be better off is not as attractive to young farmers as to their elders, officials, said, for the young think the ways to wealth are many. A young man in Dangshan county made 4,600 yuan a year by expanding the family's pig farm, exceeding the total profits made by the family of seven from the land. His father, who had thought it risky to increase the number of the family's pigs, decided that it was better to put his son in charge of family operations. /Text/ /Beijing XINHUA in English 1231 GMT 20 May 85/

CSO: 4020/241

BEIJING

# BRIEFS

GRAIN OUTPUT STRESSED--China must feed more grain to livestock and fish to produce more protein, said agricultural science academy president Lu Liangshu here today. People want more meat, poultry, eggs, milk and fish, he said. Though China produced well over 0.4 billion tons of grain, including soybeans and sweet potatoes, last year, per capita average was only 400 kg. "Output still lags far behind needs. Continued efforts must be made to increase grain production," he said. He called for 0.5 billion tons, 30 percent for fodder. He suggested 90 million hectares of food grain, 30 million of fodder and 26 million of cash crops as a rational future structure. There are now 110 million hectares of food grain and 40 million of fodder. The aim, he argued, was to integrate arable with livestock farming and food grain production with a diversified economy. Better seed strains and cultivation, plant protection and irrigation, he said, would be introduced and more fertilizer used to raise per-unit yield. /Text/ /Beijing XINHUA in English 1436 GMT 17 May 85/

RURAL MARKET INCREASES--Deals struck at 206 Chinese rural markets were worth 400 million yuan in the first quarter of this year, the journal, ECONOMIC INFORMATION reports today. This represents a jump of nearly 36 percent over the same period in 1984, the newspaper says. There were increases in volume ranging from 40 to 50 percent in major farm products, including fish, meat, eggs, poultry, cotton, tobacco, jute and firewood. Manufactured goods registered the biggest rise of 87 percent. The markets' price index went up 12 percent during that period. Prices of food such as meat, eggs, poultry and vegetables rose about 14 percent. Fish recorded the biggest rise of almost 33 percent. Prices of oil-bearing seeds, draught animals and firewood remained roughly the same as in the same period of last year. Grain continued dropping in price. Meanwhile, supplies of pork and vegetables rose on rural markets in 10 provinces, following the ending of state mandatory purchases and sales. Their prices remained stable in most areas after rises earlier this year, the paper quotes an official from the state administration for industry and commerce as saying. /Text/ /Beijing XINHUA in English 1626 GMT 15 May 85/

CSO: 4020/241



FUJIAN

AGRICULTURE GROWTH SURPASSES INDUSTRIAL DEVELOPMENT

Fuzhou FUJIAN RIBAO in Chinese 11 Feb 85 p 1

[Article: "Agricultural Output Value Increases"]

[Text] This reporter learned yesterday from the Fujian Province Rural Work Conference that in 1984 the growth rate of agricultural output value surpassed that of industrial output value for the first time. The gross agricultural output value reached 8.130 billion yuan and jumped 21.9 percent above the previous year. This has been an unprecedented tempo of growth since the Liberation.

Last year, Fujian Province took advantage of its local strong points to make full use of land and sea and obtained an overall increase in agricultural production. The grain yielded a bumper harvest although the sown lands were reduced and natural calamities happened frequently; the total output increased more than 130 million jin over the previous year. Major industrial crops such as peanuts, fruits, tea leaves and flue-cured tobacco had good harvests; sugar cane, fowls and eggs were changed from stagnant condition and increased more than 30 percent over the previous year. Moreover, aquatic products reached 13 million dan and realized the "Sixth 5-Year Plan" in advance.

An important reason for the rapid development of agriculture in Fujian Province is the readjustment of the rural enterprise structure, which has promoted commercialization and specialization of agricultural products. Last year, more than 2 million rural laborers, which made up about one-fourth of the whole labor force, were shifted to nonfarming jobs; among them more than 200,000 peasants entered into the circulation trade. The number of various specialized households and farm households that joined economic associations was 1.04 million and constituted 23 percent of total peasant households in the province, registering a 37.6 percent increase over the previous year. The gross output of the township enterprises throughout the province reached 4.3 billion yuan in 1984, a jump of 54.7 percent over 1983. In localities and cities, wherever the township enterprises developed fast, the gross agricultural output value also increased rapidly. The fastest rate of increase last year occurred in Putian City where the gross agricultural output value increased 75.2 percent and township enterprise output value increased 120 percent above the previous year.

12756

CSO: 4007/261

GANSU

#### BRIEFS

GANSU BROAD BEAN STRAIN--A new strain of broad bean with a high content of lysine has been developed after 12 years of experimental work in Gansu province, agriculture experts said here today. The "Linxia bean" has a lysine content of 0.89 percent, the highest of any broad bean strain in China. The bean, cultivated by the Institute of Agricultural Sciences of the Linxia Hui autonomous prefecture, is the result of a hybridization between a British species as female parent and a local species as male parent. As far as nutrition is concerned, the Linxia bean, with an unrefined protein content of 26.49 percent and a starch content of 40.71 percent, scores higher than any other bean type in China. The yield per hectare with the new strain is 10 percent higher than that of other strains, according to agronomists, at 4,500 kg to 6,700 kg a year. /Text/ /Beijing XINHUA in English 0656 GMT 16 May 85/

HEBEI DROUGHT-RESISTANT RICE--A strain of drought-resistant rice has been approved by Hebei Province's agricultural authorities to be introduced to paddy fields in north China, according to GUANGMING DAILY. "Ji Geng No 7," a hybrid developed from "Jing Xi No 6," a paddy field strain, and "Gin Xuan No 1," a dry field strain, is expected to grow well in north China, where annual rainfall averages 400 to 900 mm and the region is usually regarded as too dry for the crop, according to Hebei agriculture specialists. The nonglutinous rice strain, developed by Hebei University Lecturer Lu Zhang over the last decade, has come first or second in 22 of 26 experimental areas as it needs two-thirds less water than other types. With an average per-hectare yield of 3,750 kg to 4,500 kg, and high yield of 6,000 kg to 6,750 kg, the rice is also disease-resistant. /Text/ /Beijing XINHUA in English 0230 GMT 7 May 85/

CSO: 4020/241

GUANGDONG

# BREAKTHROUGH IN FORESTRY POLICY URGED

Guangzhou NANFANG RIBAO in Chinese 12 Mar 85 p 1

[Commentary: "A New Breakthrough in the Forestry Industry is Imminent"]

[Text] A good opportunity for afforestation comes again when the spring rain goes on and on. As the reform and open-door movement progresses in depth, the new requirements for forestry construction are put forward: achieve a new standard in the quantity and quality of afforestation, further promote the economic returns of forestry production and strive to become well off in the forest regions. In short, forestry ought to achieve a breakthrough!

We must make strenuous efforts to effect a significant advance although our province enjoys exceptional advantages in afforestation. The key is to change the style of leadership. It is imperative to abandon the previous way of looking at afforestation as a "temporary mission" that was aroused to precipitous action and dispersed in a hubbub. Don't adhere to formalism. Don't pay lip service. It is good enough if the appearance changes within 3 years or more because the production cycle of forestry is long; vague slogans are not suitable. Therefore, the leaders should go deep into the realities and among the masses for a thorough investigation so as to lay down their plans, steps, missions and measures on the dependable ground of work, to endeavor to plant a tree and bring it alive and to plant a tract of trees and make it grow up.

The motive power to obtain a new advance is to fulfill further the forestry policy. The "Forestry Law" is the fundamental law which has been effective since the first day of this year. Central Committee Document No 1 issued last year resolved the question of the jurisdiction over forest regions. Document No 1 this year stipulated clearly such matters so as to relax further the forestry policy, to cancel monopolized timber purchases from collective forest regions, to open markets, to allow lumber cutting by individuals and to permit collectives to put their wares freely on the market, to carry out negotiated purchases and sales and to encourage the peasants to go a step further in readjusting the production structures in the forest regions, etc. All of these will greatly mobilize the masses' initiative in the forest regions. The leadership at each level should adroitly guide actions according to circumstances in order to settle new problems arising from the implementation of the policy. Destructive lumbering is now underway in some places to earn an immediate income while not paying attention to afforestation; in other places, a

laissez-faire attitude prevails toward forest production. Nearly 30 million mu of mountain land, mostly barren or with deficient woods, were assigned to commune members as private plots in our province; hence, the progress of afforestation is slow. We should pay attention to this. Educate the masses to combine their immediate interests with long-term interests, to plant more and cut less and to protect forest resources; give necessary aid to those who have difficulties in afforesting their private lots; and help specialized households, priority households and production brigade-household combined households, which represent an advanced production force in the forest regions and play a leading role.

To afforest scientifically assures good quality. In recent years, our province obtained experience in building up high-yield forests in some places; this experience is important in raising the afforestation returns and should be promoted energetically. In order to afforest in vast areas, it is necessary to change the bad habits of rough soil preparation, bad planting and bad management. At the same time, build up a large force of scientific and technical personnel for long-term afforestation and adopt various methods to spread scientific techniques. In doing so, the standard of forestry production in our province will be greatly elevated.

12756

CSO: 4007/261

GUANGDONG

# EFFORTS IN AFFORESTATION URGED

Guangzhou NANFANG RIBAO in Chinese 12 Mar 85 p 1

[Article: "Afforestation Efforts See Results"]

[Text] Thousands upon thousands of people in our province have seized the opportunity since the beginning of spring and went to the mountains for afforestation. Now, a high tide has occurred. By the end of February, over 3,410,000 mu of mountainous land have been cleaned and have undergone soil preparation, and more than 2,460,000 mu of land have been afforested, in which over 1,710,000 mu were planted from the air and over 750,000 mu were made artificially.

All localities have realistically executed the "Forestry Law" and the party's forest policy to mobilize the masses' initiative for afforestation; a scene has appeared in which the state, the collectives and individuals simultaneously have made a concerted effort. According to statistics, over 14,000 collective forest farms and over 240,000 forestry specialized households and economic associations are the fresh troops for afforestation this year in our province. All family members of some specialized households went to the mountains to afforest as soon as the Spring Festival had passed. This phenomenon rarely happened before. Brought along by specialized households, over 2,000 mu in Maozi Mountain region in Nanxiong County were already afforested before the Spring Festival. Shantou City raised 500,000 yuan to help the specialized households and the masses solved the problem of fund shortages and stimulated afforestation activities. Now, the city has accomplished 68 percent of the entire year's mission and is ranked in the forefront among all the cities and localities of the province.

Afforestation this year emphasized practical results. The speed was no greater than in previous years but the quality was better than in the past. Before the Spring Festival, the provincial government issued a notice regarding afforestation during the spring season and required that the quality be improved. Every locality summed up its experiences and determined to change the previous bad habits of roughly plowing, planting and managing into conscientiously doing a good job in nursing seeds, refining mountains and undertaking soil preparation so as to plant a tree, then bring it alive and plant a tract of trees and then make them grow. According to statistics, a total of 93,851 mu of saplings which can be transplanted this year are comparatively sturdy, some with up to



30 percent with nourishing cups and no longer small and weak as in previous years. In the meantime, forest departments in different areas have enhanced technical instructions and have energetically built up fast-growth and high-yield forests. Some districts signed afforestation contracts with contracted households and checked on them accordingly; therefore, the quality is even better guaranteed.

The provincial forest department reported that the afforestation task this year is hard and the demand is high; progress is uneven in different areas. After transferring the power over forests, some places emerged with a laissez-faire policy, while other places underwent very destructive lumbering and nobody took care of afforestation. It is particularly difficult that 90 percent or over 30 million mu of private highlands in the hands of thousands of households have not yet been afforested. Therefore, while practicing the forest policy and fulfilling the system of job responsibility, it is necessary to keep a sober head and realistically strengthen the concrete leadership so that afforestation activities can be pushed forward in our province.

12756

CSO: 4007/261

HEBEI

BRIEFS

HEBEI ALKALINE SOIL IMPROVEMENT--Alkaline fields have been reduced by 31.4 percent on 28,670 hectares in southeast Hebei Province over the past 2 years, a local official said here today. The project began in 1983 in Guzhou and Nanpi counties with a US\$25-million loan from the World Bank and the assistance in wheat and edible oil provided by the World Food Program. By the end of 1984, the two counties spent 39 million yuan on irrigation and drainage facilities and other related projects including building bridges, sluice gates, culverts, power lines, tree-planting and training of personnel. In Guzhoj County, the areas prone to waterlogging were reduced by 56 percent while the irrigated areas and forest covers increased. Its total output and per unit output of grain nearly doubled those 2 years ago. In some parts, total output was 2.8 times that before 1983. The 5-year program was hlaf way through by the end of last year, the official said. The two counties doubled their 1982 agricultural income last year. /Text/ /Beijing XINHUA in English 0631 GMT 8 May 85/

CSO: 4020/241

HENAN

BRIEFS

POPULARITY OF FARM MACHINERY--Over two-thirds of peasants in Henan, a major province, now use farm machines. Individual peasants now own more than 320,000 tractors, 86 percent of the province's total, and many seeders, harvesters, threshers and irrigation and drainage equipment, officials of the provincial farm machine-building department told Xinhua today. The number of tractors in the province in the past 5 years equaled that between 1949 and 1978. Since 1980, when the contract job responsibility was introduced in the province, peasants have had more say in production management. Rising living standards have enabled more to shift from working in the fields to industrial and sideline production and transferred much farmland to skilled peasants, who have eased labor and improved farming by replacing animals with machines. Henan has over 7 million hectares of arable land. Over 80 percent of its 76 million people are peasants who used to rely on farm animals. /Text/ /Beijing XINHUA in English 1149 GMT 29 May 85/

CSO: 4020/241

HUNAN

BRIEFS

RICE SEED CENTERS ESTABLISHED--Hunan Province, one of China's main rice producing areas, set up 24 rice seed centers this year to develop seeds of improved varieties. Officials of the provincial seed company told Xinhua today that demand for improved rice seeds has far exceeded the supply during the current agricultural restructuring. The seed centers are growing 23 popular strains of improved rice on about 1,600 hectares and expect to be able to supply all of Hunan's rice farmers next year. Seeds and fertilizer have been allocated to these centers and the principle of price commensurate with quality is being following in order to encourage development of improved rice strains. /Text/  
/Beijing XINHUA in English 0248 GMT 17 May 85/

CSO: 4020/24i

JIANGSU

IMPROVED RESULTS THROUGH PROPER SCALE OF LAND UTILIZATION

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL TECHNOLOGY] in Chinese No 2, Feb 85 pp 20-22

[Article by Yu Yaoting [0205 5069 1656] and Gao Linsong [7559 2651 1529] of the Jinagsu Province Jiangying County CPC Committee Agriculture and Industry Department: "Strive for Results Through an Appropriate Scale of Land Utilization"]

[Text]

I

There have been major developments of agriculture, sideline production and industry in Guandong Village of Nanzha Township in Jiangsu Province's Jiangying County since the implementation of systems of contractual responsibility for output quotas in 1982. The total value of agricultural, sideline and industrial production during 1983 was 1.792 million yuan. Agriculture accounted for 16.44 percent, forestry, animal husbandry, sideline production and fisheries provided 13.80 percent, and village-run industries accounted for 69.75 percent. The average social percapita distribution level in the village was 453.49 yuan. The commune members' standard of living has been improved substantially. Warehouses are full of grain, jars are full of edible oils and all the families are busily constructing new houses.

As industry and sideline production have developed, 85 percent of the village's labor force has been shifted out of managing cultivated land. Each family has one or more members engaged in industry or other activities. As the social division of labor and activities develops and economic structures diversify, great income disparities will appear among those involved in agriculture, sideline production and industry. More and more people are not content with farming. In addition, a small but complete management pattern influences the development of commodity production and has negative effects on the improvement of economic results in agriculture. To achieve the goal of coordinating the remuneration of personnel in each line of activity and promote comprehensive development of agriculture, sideline production and industry, the village CPC branch adopted a series of measures using industry to supplement agriculture and microregulation to stabilize agricultural production. Funds were taken out of industry profits in 1982 to subsidize grain production. Farm loan subsidies from the township and village levels total 88,300 yuan in 1983. In 1984, they began "integrating



agriculture with industry" and set up "agricultural workshops" in the enterprises. They brought 77 households who sold a considerable amount of farm, livestock or sideline products into the enterprises. Of the households, 66 sold more than 2,000 jin of commodity grain, 7 sold more than 1 ton of live pigs and 4 sold more than 1,000 cubic feet of mushrooms during the year. Economic accounting in the enterprise brought the incomes of personnel in all three lines of activity up to the same level.

In the last half of 1984, they also adopted measures to encourage the peasants to transfer commodity production into the hands of the best farmers. In the past, the village's 280 mu of commodity grain fields were scattered among 410 families for farming, an average of 0.69 mu per household. To complete the task of producing 300,000 of commodity grain, each family would have to be responsible for 733 jin. After the land was transferred to 68 of the best farming households, each family farmed an average of 4.13 mu and was responsible for 4,421 jin of commodity grain tasks. Of this group, one household farmed 10 mu of commodity grain fields and sold more than 10,000 jin of grain. There were three households who farmed 7 mu and sold more than 8,000 jin of grain, 35 households who farmed 4.5 mu and sold more than 5,000 jin of grain, 11 families farmed 3 mu and sold more than 3,000 jin of grain, and 18 households farmed 2 mu and sold more than 2,000 jin of grain. Besides being able to free up labor for non-farming activities, the transfer of commodity grain fields into the hands of a smaller number of the better farmers allowed large farm families to obtain [greater] economic benefits through expansion of the scale of management. Calculating a dual crop of rice and wheat at 450 jin of wheat per mu and 850 jin of rice per mu, the income of a moderate level of labor power that assumes contractual responsibility for 2.5 mu of commodity grain fields added to the grain subsidy funds and income from consumption grain fields could reach 924 yuan per year, equal to the income of a person working in industry. Labor power farming 4 mu of commodity grain fields would have an annual income exceeding 1,500 yuan, more than 30 percent higher than the income of a worker employed with higher technology in industry.

## II

After reform of industrial structures in this village, the following measures were adopted to deal with a situation where most people were only willing to farm consumption grain fields and were not willing to farm commodity grain fields by encouraging the peasants to transfer commodity grain fields into the hands of capable farmers.

1. Economic subsidies. The low production benefits of agriculture mean that a laborer would derive a net income of only about 600 yuan a year from planting 4 mu of cultivated land, equal to only around 60 percent of the income of peasants employed in industry. The village decided that the industrial profits of enterprises at each level would be retained for assistance to agricultural production for those persons farming commodity grain fields. Families selling less than 2,000 jin of grain would receive a subsidy of 0.05 yuan per jin of grain. Those selling 2,000 to 3,000 jin

is 0.10 yuan, for 4,000 to 5,000 jin is 0.15 yuan and for 5,000 jin is 0.20 yuan. In this way, a worker who farms 4 mu or more of commodity grain fields would receive a total of more than 1,500 yuan in income and subsidies for sales of 5,000 jin of commodity grain.

2. Improved welfare treatment. Besides receiving subsidies for commodity grain, all households selling more than 2,000 jin of commodity grain who have a member who takes a job in village-run enterprises receive welfare treatment equal to that of an enterprise employee. They are given one towel, one plastic raincoat and one straw hat each year and one pair of farm boots every 2 years.

3. Give consideration to joining up plots of land. During implementation of systems of contractual responsibility for output quotas by households, they adopted the measure of assigning a plot of consumption grain fields for each person and distributing responsibility fields according to labor power. The land was distributed in very scattered plots that were difficult to manage and hard to cultivate. During deployment of grain and cash crops this time, larger plots of good quality land near the village were distributed to large farming families as commodity grain fields. In addition, they also used discussions among the masses and guidance to readjust the peasants' small scattered consumption grain plots.

4. Provide good services of all types. Large households formerly engaged in farming stated that they had six worries in the past. They were worried over threshing, mechanical cultivation, plots of land, capital, grain sales and the inability to purchase chemical fertilizers at parity prices. The village decided to provide consideration for large farm families by giving them priority over threshers. Threshers owned by production teams first were used to meet the needs of large farming households. They also signed mechanical cultivation contracts with tractor drivers and guaranteed that they could be used wherever they were needed. To meet real needs, they decided to divide up the plots of land to meet the needs of rush harvest and rush planting. Households with capital problems were given production capital in advance according to the amount of land. Large farm households were given grain sales cards and grain departments made purchases from them first using special scales and warehouses. Chemical fertilizer at parity prices was provided in proportion to amount of commodity grain sold to give precedence to meeting the needs of households selling commodity grain.

5. Assistance for pig raising. As the amount of land for which they have contracted increased, large farm households required a corresponding increase in the number of live pigs to raise. Assistance for developing pig raising was provided according to the amount of cultivated land they had contracted, at 100 jin of feed grain per mu. Some 27 of the households had inadequate pigstys. The problem was solved by giving them preference for using the production teams' collective pigstys at no cost.

### III

The primary advantages of concentrating commodity grain land into the hands of large farm households were:

1. It favored specialization of agricultural production and raised the level of intensive management. The concentration of commodity grain fields into the hands of 68 specialized households in this village created conditions favorable to improvement of management levels, scientific farming practices and development of intensive administration. Commune member Xu Kunquan [6079 0981 3123] of the No 3 production team assumed contractual responsibility for 4.5 mu of commodity grain fields and planned to sell 500 jin of grain in 1985. After signing the contract, he gave up his temporary position in the village's prefabrication workshop and shifted his energies to agricultural production. He bought two books on agricultural science and technology, subscribed to XINXI BAO [INFORMATION REPORT] and decided to raise agricultural production to new levels in 1985. The large farm household of Xu Shurong [6079 2885 2837] in the No 10 production team assumed contractual responsibility for 5.3 mu of land in 11 parcels of various sizes in 1985. Cultivation was difficult and the nearest plot was more than 2 li from his home. He could carry only 4 or 5 dan of pig manure in a single morning. He now has assumed contractual responsibility for 10 mu of commodity grain fields and must sell 10,427 jin of commodity grain. All of his fields were shifted to 4 parcels of good land near the village.

2. It has caused the labor that was transferred to be concerned with doing good work in non-agricultural activities. The village has more than 920 laborers engaged in industry, commerce, shipping, construction, services and other non-agricultural activities. Originally, most families planted consumption grain fields as well as commodity grain fields, so their attentions were divided. This had certain effects both on agricultural production and on non-agricultural activities. A situation where about 20 percent of the land became semi-abandoned appeared, and the management level of even more households declined. Many had to forsake industry during the busy farming season and return home to farm. Now, commodity grain fields have been concentrated in the hands of skilled farmers. The consumption grain fields of those engaged in non-agricultural activities usually are farmed with auxiliary labor power from their families. They take out time during the busy seasons for rush harvesting and planting, but most of the time they do not have to be concerned [with farming] and can go outside for other activities to develop agricultural, sideline and industrial production. There are two people in No 10 production team member Fu Weixing's [4569 2607 5281] family. They are involved in shipping goods by boat. They contracted for 3 mu of cultivated land in the past and had to sell more than 1,000 jin of surplus grain. Because they were away for long periods and could not keep up the administration, their paddy rice yields were only 300-plus jin per mu, two-thirds less than normal households. They transferred all of their commodity grain fields into the hands of skilled farmers and estimate that their income from shipping will increase by more than 1,000 yuan.

3. It has favored the transfer of surplus labor power, full utilization of surplus labor time and higher labor productivity. Although not much labor remains in the production teams of the village, the surplus labor time still is not being fully utilized except for the 3 busy months at home each year. After the commodity grain fields were transferred this time, the utilization rate of labor within the team was raised and the village

as a whole was able to shift 67 workers into orchards, fishing grounds and other areas to raise cash crops and develop fisheries production. They will create an estimated 100,000 yuan in value of output in 1985 and increase the commune members' income by 40,000 yuan. The family of Geng Heshang [5105 0735 1424], a member of the No 1 production team, has three laborers. They originally contracted for 5.8 mu of land but still had surplus labor time that they could utilize. This time, they increased the amount of land they had contracted by 1.5 mu and plan to sell more than 5,100 jin of commodity grain. They predict that their income will increase by more than 300 yuan because of the higher rate of labor utilization.

12539

CSO: 4007/314

LIAONING

# XINHUA PROFILES PEASANT GIVEN HELP FOR BUSINESS

OW181234 Beijing XINHUA in English 1031 GMT 18 May 85

/Text/ Qian Huiming, a disabled peasant who was living in poverty only a year ago, said, a big "thank you" this week to his local county authority.

He travelled to the Zhangwu County offices in remote western Liaoning Province, northeast China, to express his gratitude for the help he has received in building a successful new business.

Deputy County Chief Guan Fengchun explained that last year, Qian, his handi-capped wife and their 4-year-old child were scraping a living from the land.

She said they were earning less than 360 yuan a year, and depended on government relief to survive.

But with advice from county officials together with an interest-free loan, Qian started an onion-growing business, and earned 1,100 yuan in the first 12 months.

He is one of a growing number of peasants who are becoming better off with government help.

Addressing a Beijing national conference on aid to poorer families earlier this year, Civil Affairs Minister Cui Naifu said there were 14 million poor peasant households--or 70 million people--across China, whose income was low because of shortages of labor, funds or technology, or because of natural disasters or personal misfortune. They represented eight percent of the rural population.

The government reduced or waived various taxes on these households.

In addition, the authorities provided them with low-interest loans, and gave them priority in purchasing their agricultural and sideline produce, and in supplying them with equipment.

They also received help in developing commodity production and in participating in joint economic operations.



A Liaoning civil affairs bureau official said aid and priorities were given to households with an annual income per capita of below 120 yuan. The average income per head for the province's rural population was 477 yuan last year.

It has been a policy of the government to attract these peasants into township enterprises where they can earn stable incomes.

According to provincial Vice Governor Zuo Kun, more than 70,000 officials visited poorer peasants last year to help them overcome their difficulties.

The Liaoning provincial government has provided jobs in welfare factories for 11,000 handicapped peasants.

In addition, 4,200 children of poorer peasant families who had dropped out of school, returned to their classes with government help.

According to the official, a third of the province's poorer peasant households have become better off since 1981.

Three of the province's poorest counties are running courses aimed at showing peasants the benefits of modern science and technology.

CSO: 4020/241

NEI MONGGOL

BRIEFS

PEASANTS SWITCH TO INDUSTRIES--About 40,000 former herders in Inner Mongolia have switched to industry and commerce over the past 2 years, a local official said here today. The peasants from the Mongolian, Daur, Ewenki and Han ethnic groups have taken up mining, manufacturing building materials, engineering, transport and animal byproduct processing. Some are also running hotels, restaurants and shops, and this switch from farming is boosting the underdeveloped local economy, said the official. The number of such enterprises now exceeds 10,000 in pastoral areas. Last year, enterprises run by townships and villages produced an output value of 60 million yuan, equivalent to 10 percent of the animal husbandry output. For centuries, animal husbandry was the sole occupation on the Inner Mongolian grasslands. /Text/ /Beijing XINHUA in English 0739 GMT 31 May 85/

CSO: 4020/241

1 July 1985

## SHANDONG

## BRIEFS

INTERNATIONAL SOIL SYMPOSIUM OPENS--An international symposium on improvement of salt-affected soils opened today in Jinan, capital of Shandong Province. Eighty scientists from 12 countries and the food and agriculture organization of the United Nations are attending the 5-day symposium to study and exchange experiences on the improvement of the salt-affected soils. Addressing today's opening ceremony, He Kang, minister of agriculture, animal husbandry and fishery, spoke on China's progress in reclaiming salt-affected soils. The country has reclaimed more than 3.5 million hectares of saline and alkaline soils in the past 3 decades. Two million hectares of saline and alkaline soils have also been improved in northwest and northeast China. Just before the opening of the symposium, foreign scientists made an inspection tour of three pilot farms in Hebei and Shandong provinces, where trees and food crops are now growing on former salt-affected soils. The symposium is sponsored by the Ministry of Agriculture, animal husbandry and fishery. /Text/ /Beijing XINHUA in English 0907 GMT 17 May 85/

CSO: 4020'241

YUNNAN

YUNNAN AGRICULTURAL DEVELOPMENT OVER 35 YEARS REVIEWED

Kunming JINGJI WENTI TANSUO [INQUIRY INTO ECONOMIC PROBLEMS] in Chinese No 9, 20 Sep 84 pp 15-20

[Article by Ma Mingli [7456 2494 4409] of the Yunnan Provincial Department of Agriculture: "Free Our Thinking, Support Reform and Vigorously Develop Agriculture; Accomplishments of the 35 Years Since the Founding of the People's Republic"]

I. Accomplishments Since Liberation

Yunnan is a mountainous border province with many nationalities. In the 35 years since liberation, vast numbers of agricultural cadres, S&T personnel and people of various nationalities, all together under the leadership of the party, have worked hard, struggled bitterly, based themselves on the red heart of unlimited trust in the party and in socialism, did not fear danger or fear complications and used their own two hands to continually change agricultural production conditions, and thus enabled the agricultural frontline to achieve very great accomplishments.

A. Agricultural Production Has Had Fairly Large Growth, Guaranteeing the Needs of the People's Standard of Living and Making the Whole Province Basically Self-Sufficient in Grain, Oil and Meat.

The total agricultural output value grew 3-fold between 1949 and 1983, an average annual growth rate of 8.8 percent and the total grain yield increased 1.43-fold compared to 1949, an average annual growth of 4.2 percent. Of these, paddy rice doubled, an annual increase of 2.9 percent; corn increased 1.64-fold, an annual increase of 4.8 percent; wheat increased 3.5-fold, an annual increase of 10.23 percent; broad beans increased 87 percent, an annual increase of 2.6 percent; and the total yield of oil-bearing crops increased 4.88-fold, an annual increase of 14.3 percent. Particularly in the past 5 years, with the continued rapid growth (annual increases of 30 percent) giving annual grain yield increases of 600 million jin and oil-bearing crop increases of 330,000 dan, we have begun to realize a situation where there is no crop reduction in years of major natural disasters, a small crop increase in years of minor crop disasters and abundant yields in years with no disasters.

Before liberation, each year Yunnan had to import a part of its grain from Vietnam and Burma. Relevant data notes that in 1929, the cost of importing

grain was 1.03 million liang of par silver, making it third among 26 imported materials. After liberation in the 1950's, in addition to being self-sufficient in grain, there was even a slight surplus. But later, with the population increase, the increase in grain used by industry and in feed, along with other factors, a grain shortage appeared. Since the third Plenum of the 11th CPC Central Committee, and with the conscientious implementation of the party's various guiding principles and policies, there have been successive yearly increases in grain and oil-bearing crop production. At present, apart from those varieties requiring regulation, the province has basically achieved self-sufficiency in grain and oil-bearing crops.

The total yield and developmental speed of major cash crops far surpass the development of grain and oil-bearing crops. The total yield of sugarcane grew from 5.51 million dan in 1949 to 70,584,000 dan in 1983, a 12.8-fold increase in total yield in a 34-year period; the total yield of cured tobacco grew from 441,000 dan in 1949 to 2,888,000 dan in 1983, a 64.5-fold increase; the total yield for tea leaves was 50,000 dan in 1950 and 514,000 dan in 1983, a 9.3-fold increase; the total yield of silkworm cocoons grew from 1,800 dan in 1949 to 27,000 dan in 1983, a 14-fold increase. In the past 5 years, sugarcane has increased 1.2-fold, cured tobacco 17.7 percent, tea leaves 44 percent and silkworm cocoons 1.1-fold, and so to a certain extent, the development of cash crops reflects the turn for the better of the grain situation and it also reflects the prosperity of the rural economy.

Animal husbandry is an important integral component of agriculture. According to inventory figures, Yunnan hogs are 7th in the nation, its cattle are 2d and its goats are 11th. Animal husbandry output value rose from 125 million yuan in 1949 to 1,384,000,000 yuan in 1983; and in this period, it grew at a rate of 8.1 percent between 1949 and 1957 and at a rate of 6.6 percent between the early 1960's and 1983, faster than the developmental rate for cultivation. The commodity rate, in particular, has risen quite rapidly in the past few years, with 938,170,000 jin of meat produced in 1983, 55,801,000 jin of fresh milk, 3,205,000 jin of wool, of which 55.2 percent was fine and semifine wool, and 10,400 jin of poultry eggs. The per capita consumption of pork rose from 12.5 jin in 1952 to 27.32 jin in 1983. There was also some development in fishery. In 1983, there were 19,272 tons of aquatic products, the highest yield in history, and a 19-fold increase over the 960 tons of 1952, an average annual increase of 621 tons, with an average annual increase of 1,610 tons for the past 5 years or 1.5-fold higher than the ordinary year's increase. There are now 133 fish hatchery stations, and we are basically self-sufficient in fry. In 1979, we introduced the Taihu whitebait into Dian Chi [lake] and in 1982 the whitebait yield reached 1 million kg, and in 1983 it reached 1.5 million kg, continuing the stable and high yields, and it has already become an important fish variety with fairly high economic value for Yunnan.

Since the Third Plenum of the 11th CPC Central Committee, the number of economic associations of various forms that peasants have voluntarily organized has increased daily and village and town enterprises have sprung up and developed. In 1978, the average per capita income from village and town enterprises for the agricultural population was 13.1 yuan and in 1983 it reached 37 yuan.



With the development of agricultural production, peasants' lives have improved greatly. In 1983, the average per capita net income for the agricultural population was 274.4 yuan, a 42.6 yuan increase over 1982 and a 171.4 yuan increase over 1978.

#### B. Obvious Achievements from Developing Agricultural Regions, and Adjusting Crop Distribution

Since the Third Plenum of the 11th CPC Central Committee, we have comprehensively begun surveys in various fields, such as land, water and atmospheric resources, forestry resources, etc., and on this foundation, extensively spread comprehensive agricultural regions at the county level, proposed the adjustment of agriculture, forestry, animal husbandry, sideline occupations and fishery distribution and of crops cultivation, and the results of application in delimited regions in the border area and actual production experience of the past few years shows that this is the basic task for developing agricultural production at a high speed, and that without greatly increasing investment, we can hasten benefits and avoid harm, and that the postadjustment crop distribution will be even better suited to the actual conditions of Yunnan and, consequently, the economic benefits are obvious.

Within agriculture as a whole, the proportion of the total output value for cultivation declined from 66.2 percent in 1978 to 60 percent in 1983, and the output value of forestry, animal husbandry, sideline occupations and fishery rose from 33.8 percent to 40 percent, demonstrating that the single-product agricultural economy of Yunnan is now gradually improving.

Within cultivation, in line with the guiding principle of "while by no means relaxing grain production, actively develop a diversified economy." In adjusting harmonize present production with long-range plans, this season's yield with the total cyclical yield, utilized land with fallow land, investment with output. In the past few years, the area sown in crops to be reaped in the spring was reduced by 410,000 mu, or 1 percent, while the yield per unit increased 19.9 percent and the total yield increased 2,567,000,000 jin, an 18.7 percent increase; the area of utilized land taken by cash crops was expanded 917,000 mu, to 19 percent, and the total yield increased 93.7 percent. Among grain crops, at the same time that we strive to increase yield per unit, we should appropriately expand the paddy rice area and stabilize the corn area; of the crops sown in late autumn, at the same time that we get a good handle on field wheat production in fields that have fairly good water and fertility conditions, we should appropriately reduce the dry land wheat area, and expand soil-enriching crops like rapeseed, broad beans and green manure. In 1979, we grew 15,639,000 mu of paddy rice (including upland rice), with a yield per unit of 489.1 jin, and a total yield of 7.65 billion jin, and in 1983 it had expanded to 16.605 million mu, with a yield per mu of 550 jin and a total yield of 9.14 billion jin. The area had expanded 6 percent, yield per unit had increased 12.5 percent, and total yield had increased 19.4 percent; the area of maize was reduced by 3.8 percent, and yet yield per unit rose 24.3 percent and the total yield increased 879 million jin or 19.52 percent; the small spring wheat crop was reduced from 9,965,000 mu to 7,009,000 mu, yet the total yield increased from 1,411,000,000

jin to 1.73 billion jin, a 22.6 percent increase; broad beans increased from 2,961,000 mu with a total yield of 510 million jin to 3.28 million mu with a total yield of 703 million jin, a per-unit-yield increase of 23.4 percent and a total yield increase of 37.8 percent. The sugarcane areas expanded 200,000 mu to 28.2 percent of the total, and the total yield increased 94.59 percent; the area in cured tobacco expanded by 200,000 mu to 22.6 percent of the total, and total yield increased 36.2 percent; the tea leaf area expanded by 120,000 mu to 8.2 percent, and total yield increase 72.9 percent; cotton, which has had little economic results, was reduced, and the 791,000-mu area of 1979 was reduced to 550,000 mu, a 30 percent reduction. At present, the province has already begun to set up 25 commodity grain base counties (including 148 base communes), 28 cured tobacco base counties, 10 sugarcane base counties, 18 oil-bearing crop base counties, 14 key tea leaf counties and 16 key silkworm cocoon and mulberry counties.

#### C. Significant Growth in Agricultural Capital Construction and Material Investment

Apart from a very few dry areas, the annual rainfall in Yunnan is about 1,000 mm and it is a bit higher in the southern prefectures, but because there are clear dry and wet seasons and rain distribution is uneven, water conservation facilities are still crucial elements that impact on stable, high crop yields. Since the founding of the People's Republic, the water conservation frontline has achieved very great accomplishments, and constructed over 280,000 projects for storing water, diverting water and raising water, and the effective irrigated area of 14,378,000 mu is 33.8 percent of the cultivated area, or an average of 0.49 mu per agricultural population, a 2.9-fold increase since before liberation. In addition, we have also constructed 2,300 km of dykes, thus protecting 2.17 million mu of agricultural land; we have built projects for draining flooded fields for 2.58 million mu; and controlled soil erosion on 17.23 million mu. The effectiveness of these projects has strengthened the ability of farm fields to resist disasters, and has promoted the development of agricultural production.

Of the entire province's 42.48 million mu of cultivated land, 9.09 million mu, or 21.4 percent, has fairly high fertility; 19.97 million mu, or 47 percent, has medium fertility and 13.42 million mu, or 31.6 percent, has low fertility. Since the establishment of the People's Republic, we have carried out continual improvements aimed at the existing problems of low-yield land. According to incomplete statistics, the 4.27 million mu of dry sloping cultivated land that has been changed to platform and terraced land, is about 22.5 percent of the dry sloping cultivated land; we improved 4.22 million mu of red soil, or 32.5 percent of the area that should be improved; improved 1.46 million mu of various kinds of low-yield fields such as those which are deserted, unfertile, rust-contaminated, gummy, leaky, etc.; and improved 2.12 million mu of land with irrigation and drainage canal systems between fields, land leveling and the construction of contour fields. Through comprehensive measures like increased application of organic fertilizer, the development of green manure, the rational application of chemical fertilizer, the opening of canals for water drainage, mixing sandy and foreign soils, etc., nourishing fertility, strengthening the capacity for retaining water and maintaining fertility and

reducing water and fertility loss through runoff. The province has already constructed over 8 million mu of stable high-yield fields protected against drought and waterlogging so as to build a foundation for increased yields in agriculture.

Agricultural machinery is technological equipment and a means for raising labor productivity. At present, Yunnan is in a situation that relies mainly on human and animal power, is semi mechanized and is just now beginning to use machinery. In the past few years, with the turn for the better in the rural situation, agricultural machinery has developed very rapidly. The figures for tractors, irrigation machines and automobiles used in agriculture show that there has been a 38.4 percent increase in 5 years, or an average annual increase of 7.7 percent. Comparing 1983 with 1978, large and medium-sized tractors have increased 26.7 percent, to an average of 1 for every 2,334 mu of cultivated land; handed-guided tractors have increased 94.3 percent, or an average for 1 for every 867 mu. Irrigation machines have increased 37.7 percent and automobiles used in agriculture have increased 2.13-fold. Other items, like rural roads, electricity, processing machinery, biological energy sources, etc., have also developed a lot. In 1983, the province had 32,704 methane-generating pits, a 2.3-fold increase over 1978. At present, with the development of agricultural production, increased income and the rise of the "two households," the demands of the broad countryside for various kinds of agricultural machinery have become greater and greater, the demands for product quality have become higher and higher, the momentum of this "agricultural machinery craze" is just now unfolding, and it is expected that in the not too distant future, there will be quite great development in agricultural machinery, and the reform of technological methods will inevitably hasten the speed of agricultural development. In addition, chemical-industrial products, such as agricultural chemicals, chemical fertilizer, growth stimulating agents, plastic film, etc., are major material bases for the construction of modern agriculture, with the amount used in agriculture having increased rapidly since 1952. To take chemical fertilizer as an example, in 1952, the amount used was only 20,000 tons, but in 1983 it was 1,475,000 tons, and the average amount of chemical fertilizer applied per mu annually is now 69.4 jin. Various kinds of new agricultural chemicals with high efficiency and low toxicity and plastic films and ultra-thin films have also doubled in use in recent years. In 1983, 5,500 tons of film was used in agriculture, an 11-fold increase over 1978. The material investment in these modern chemical-industrial products guarantees the continued increase of agricultural products.

D. We Have Nurtured Talent and Set up S&T Teams and Gradually Constructed a Technical Extension System and a Scientific Research and Education System Geared to Production in Order To Promote Production.

Before liberation, Yunnan's agricultural technology forces were very weak, but after liberation, with the party's guidance, various levels of party and government departments gave full attention to nurturing specialized technical talent, and in 1983, the province had an agricultural college with 6 departments and nearly 1,000 students; it had 17 middle-level agricultural schools with 11 specialties and 2,582 students; it had one middle-level veterinary school

with 2 specialties and over 200 students. Since the Third Plenum of the 11th CPC Central Committee, agricultural education has implemented the guiding principle of "readjusting, restructuring, consolidating, and improving," there has been development while recovering, improving while consolidating and creating while reforming. The province's higher and middle-level agricultural schools are already gradually getting on the right track. At present, many technological mainstays on the frontline of Yunnan's production were all nurtured by Yunnan itself since liberation. For 35 years, the comrades on the frontline of agricultural education have indefatigably worked hard, providing many talented people for Yunnan's agricultural development, and making their own contribution. In addition, there are 14 prefectures and 59 counties in the province that run their own agricultural dissemination schools, with 2,790 students in the first period. There are about 100 agricultural middle schools run by the education departments, with 5,000 students. Agricultural education begun by multiple levels and channels is a good means for raising the rural S&T educational level. Between 1978 and 1983, some 1.52 million grass-roots technical personnel were trained for short periods in various places and counties throughout the province, and their strength will certainly hasten the process of modernized agricultural construction.

At present, the reform of agricultural system organs above the county level is already basically concluded, and we are just now setting up and perfecting an agricultural technology extension system and a scientific research and education system to serve production development. Provincial, prefectural and county seed companies have been strengthened, and at the county level there are already 33 counties that have established agricultural technology extension centers which unify and organize various specialized technical strengths and cooperate in dividing them by specialty and which also take responsibility for agricultural technology demonstrations and extension and for training throughout the whole county. The province set up a central agricultural technology extension station responsible for the management of the extension system and for the demonstration and extension of major technical projects. Some prefectures and cities are also planning to construct extension centers. The gradual establishment of this system creates the conditions for hastening the transfer of scientific research achievements to production and enabling latent productive forces to transform into actual productive forces. None of the prefectures and counties that have still not set up extension centers have agricultural scientific institutes or agricultural technology stations, but they have area stations which are responsible for experiments, demonstrations and extension work. According to a survey of the current situation of specialized talent, by the end of June 1983, the provincial agricultural system had 7,564 agricultural S&T personnel, and of these, 16.2 percent are college-educated specialists, 76.5 percent are specialists with middle school education, and 7.3 percent are otherwise qualified. Of the total number of agricultural S&T personnel, 81 percent are in county and district level work. On the average, each agricultural technician is responsible for 5,639 mu of cultivated land, producing 2.5 million jin of grain and 678 mu of cash crops. For 35 years, this team has diligently and conscientiously given itself to agricultural technology transformation work under quite difficult conditions, and are highly valued by leaders at all levels and welcomed by



the masses. For example, since the 1970s, we have gradually established a system for breeding improved varieties, began cross-breeding and breeding with new technologies. In 1983, hybrid paddy rice was popularized in 350,000 mu throughout the province, and hybrid maize in 1.98 million mu, which were increases of 59 percent and 32.9 percent, respectively, over 1982. Hybrid paddy rice can increase yield per mu from 200 to 300 jin over ordinary rice, and hybrid contract millet can also increase yields from 100 to over 200 jin. From 1979 to 1982, the province popularized hybrid paddy rice over 1.35 million mu, and popularized hybrid contract millet over 8.0 million mu, which increased grain a total of 1.07 billion jin. At the same time, we established a number of bases for breeding improved varieties and seed production, and in 4 counties we have begun experimental units for the "four modernizations and one supply."

Plant protection work basically eliminated paddy rice fragrance sickness [Yizhu Xiangbing 0001 2691 7449 4016] in the 1960s, and many prefectures and counties have basically eliminated wheat bunt, and we have also reduced the damage rate from paddy rice snout mouth larva and bakanae disease to under 1 percent, and in the 1970's, we popularized chemical herbicides in an area of 27 million mu, controlling damage from tooth grass and also basically prevented and controlled virosis, stalk nematodiasis and army worms. In recent years, the popularization and use of high efficiency, low toxicity agricultural chemicals, and the prevention and control of rice blast, bacterial leaf blight in rice, wheat rust and corn snout mouth larva in a comprehensive way have achieved outstanding results. In soil fertility, at the same time that we have begun a general soil survey for the whole province, we have also begun the improvement and use of low-yield red soil. In 1982, we improved 1.34 million mu of red soil, and increased grain yield per mu by 43.8 jin, and the yield of cash crops increased 10 percent and more. In 1983, we improved 2.55 million mu of red soil, and increased grain yield per mu by 56 jin, and in 1984, we improved 4.22 million mu of red soil.

In cash crops, we carried out demonstrations and popularized high-sugar content and high yield cultivation technology for sugar cane over 348,000 mu, earth film plant cover techniques over 2,000 mu, bringing a yield of 5 tons per mu and increased income of 24.4 yuan for each mu, with an increased output value of 8.5 million yuan; we achieved outstanding results in planting new high-yield tea plantations, renovating old tea plantations, and with demonstrations of high-yield fruit technology, etc. With grain crops, we popularized the use of [plastic] film to raise paddy rice seedlings over 170,000 mu, and transplanted them to over 2 million mu of large fields, and on average yield per mu increased from 100 to 200 jin of paddy rice. In 1984, the use of plastic film to raise seedlings was spread to 200,000 mu, which could be transplanted to 2.5 million mu of large fields. In recent years, dryland rice production has gradually developed, and in 1984, dryland rice was grown in 3.3 million mu, with the agricultural technology department popularizing the "two chemicals and one hybrid," (chemical weeding, chemical nitrogen and phosphorus fertilizer and the spread of hybrid rice cultivation), and Xiashan has begun demonstrating farming techniques for high-yield tropical dryland rice, developing dry valley areas into tropical areas.



Veterinary medicine work has developed very rapidly in recent years due to close attention by leaders at all levels and because of the needs of rural economic development. Management organs and an epidemic prevention system have begun to be set up. There are now 9,050 veterinary medicine cadres that were organized by the state, and of these, 4,923 or 54.4 percent are technicians, and 15.7 percent are college level; each person is responsible for an average of 6,073 head of livestock. In recent years, we have achieved outstanding accomplishments in a number of fields, such as the introduction and improvement of animal varieties, particularly the improvement of fine-haired sheep and semifine-haired sheep, the development of poultry raising, the spread of breeding with frozen semen, the development of compound feed, the improvement of feed management, the prevention and cure of major livestock and poultry epidemic diseases, etc., while at the same time, we have also introduced technology and set up a beef cattle research center in cooperation with Australia, and imported forage grass and superior breeds of livestock from abroad in order to lay a solid foundation for the great future development of animal husbandry.

In aquatic product cultivation, we have spread the use of excess heat from plants, of runoff water from warm springs, of net cages, dammed lakes, banks and dykes and raising fish in paddy fields. In 1983, the demonstration area for these techniques was over 30,000 mu, which raised the output value per mu of water surface by 42.6 yuan, or a total increase in income of 1.3 million yuan. Village and town enterprises are just now developing in depth, and comparing 1983 to 1982, the output value has increased 21 percent.

## II. A Tentative Plan for Promoting Agriculture

In recent years, a wonderful unprecedented situation has appeared in the countryside. To realize the great strategic goal of quadrupling total industrial and agricultural output value by the end of the century, agriculture must serve as the foundation of the national economy and we must strive in the next 10 years for even faster growth; by the end of the century, the major agricultural products will basically be able to meet the needs of national economic development, and we will expand high-quality agricultural and animal husbandry products for export. A great deal of labor will shift to rural industry, the construction industry, forestry, animal husbandry, sideline occupations, fishery and various service industries, the production structure will be even more rational and the ecological environment will be even better. Rural science, technology, education and various social service enterprises will develop appropriately and the material and cultural lives of the peasants will develop to the point of being somewhat well-off, and we will begin to establish a prosperous, enlightened new countryside centered on small towns.

The great proportion of Yunnan's territory has a subtropical climate, with good water and heat conditions, extensive forest land and grassy mountains, abundant resources of animal and plant varieties, mountain and forest specialty products that are known here and abroad, tropical crops and medicinal material resources, with over 2.6 million mu of water surface suited to aquatic product cultivation, and ample land resources that await development. There are many

nationalities and each have their own traditions and experience in developing production. On top of this, the present production level is not high and economic development is very uneven between areas, and we have obvious three-dimensional agricultural characteristics, suited to the overall development of agriculture, forestry, animal husbandry, sideline occupations and fishery. Mineral resources used in agriculture are fairly abundant and there is already a definite foundation for construction in water conservancy, farm field, chemical fertilizer and the agricultural machinery industry, and by the end of the century, we should strive to reach a point where every person approaches or reaches 800 jin of grain. And as for the demands for sufficient meat and nonstaple foodstuffs, if we liberate our thinking, support reform, seek truth from facts and work energetically, this goal can be realized.

Grain production should concentrate on increasing yield per unit, with flatlands specializing in water paddy rice, and mountain areas striving to raise production of corn, dryland rice, potatoes and legumes; late autumn crops should be concentrated on wheat and broad beans, and we should plan to reach a total yield of 23.5 billion jin by 1990, a 6.2 billion jin or 35.8 percent increase over 1980. This is an annual increase of 3.1 percent and a per capita average of 653.2 jin or 733.3 jin for each agricultural person, which is an increase of 108.2 jin over 1980. By the year 2000, the total grain output will reach 30 billion jin, an increase of 6.5 billion jin or 27.7 percent over 1990, which is an average annual increase of 2.5 percent, a per capita average of 755 jin or 847.5 jin for each agricultural person.

Production cash crops should stress the products that we have an advantage in, such as sugar cane, tobacco and tea, and we should concentrate on high quality and high yield, appropriately expand the area in these crops and set up commodity cases. In 1990, we should cultivate 1.7 million mu of tobacco, with a yield of 350 jin per unit and a total yield of 6 million dan, which would be a 1.89-fold increase over 1980; by 2000, we should cultivate 2 million mu, with a total yield of 7 million dan. In 1990, we should plant 1.2 million mu of sugarcane, bringing a total yield of 120 million dan and producing 600,000 to 700,000 tons of sugar, a 2.25-fold increase over 1980, and in 2000 we should plant 1.5 million mu, bringing a total yield of 165 million dan and producing 1 million tons of sugar; in 1990, the area of tea plantations should be expanded to 2 million mu, a picking area of 1.5 million mu and total yield of 1 million dan, which would be a 1.8-fold increase over 1980, and by 2000 we should have 2.5 million mu of tea plantations, a picking area of 1.5 million mu and total yield of 1.6 million dan, which would be a 3.48-fold increase over (1980); mulberry orchards for silkworms should be 350,000 mu in 1990, producing 200,000 dan of cocoons, which would be a 13.6-fold increase over 1980, and in 2000 we should have 500,000 mu of mulberry orchards, producing 500,000 dan of cocoons, and which would be a 1.5 fold increase over 1990. In addition, there should also be fairly great development in oil-bearing crops, medicinal materials, vegetables and fruit trees, and the estimated total output value for cash crops should reach 2,422,000,000 yuan in 1990, a 2.85-fold increase over 1980, and by 2000, it should reach 3,743,000,000 yuan, a 54.5 percent increase over 1990.

There is great potential for the development of production in animal husbandry, and we should plan to achieve a total output value of 4 billion yuan by 2000, which would be about 30 percent of total agricultural output value, quadrupling that of 1980 and an average annual increase of 7.2 percent. Within the structure of animal husbandry, the output value for grass-eating livestock would be about one-half. Adopt the comprehensive development of raising hogs and grass-eating livestock, poultry raising and bee raising simultaneously in agricultural districts, pastoral districts, cities, suburbs and industrial and mining districts, and so solve the supply problem of urban industrial and mining districts for milk, eggs, poultry, lean pork, beef and mutton. For a fairly long period, pork will still be the major meat commodity to be supplied, and we must continue to develop it and gradually increase the proportion of lean pork.

Solving the problem of forage grass and feed and getting a good handle on the prevention and treatment of epidemic disease are the two key measures for guaranteeing the development of animal husbandry, and we should stress the feed-processing industry and the production of additives, popularize silage and compound fertilizer, do well with the construction of manmade pastures, make economic results the core, increase animal and poultry products, increase peasant income, set up an animal husbandry area economy with Chinese characteristics and a comprehensive animal husbandry production and processing system.

Yunnan has over 40 kinds of fish resources with economic value, yet at present only 27 percent of the water surface that could be used for raising fish is now being used. In the near future, we must strengthen fishery administration and management, actively protect fish, increase the cultivation and rational use of fish resources, carry out the combination of increasing fish cultivation with placing fish in the proper places to breed, gradually increase the amount of fish raised, popularize scientific fish cultivation technology, prevent and treat fish diseases, achieve skillful cultivation of high yields and not so skillful cultivation of increased yields, fully utilize water surfaces and raise yield per unit area. At the same time, we should set up a service system for strengthening service for fish cultivation such as fry, feed and popularizing technology.

From here on out, we must further liberalize policies regarding village and town enterprises, allowing them to apply measures according to local conditions, clarify focal points, develop their own features and advantages and implement the Central Committee's proposal to "correctly increase support, guidance and management so as to enable their healthy development."

The responsibility system tying pay to production and contracted down to the household level has already become the basic organization form of current agricultural production. The specialized households and key households that have developed on the basis of contracting down to the household level are representatives of the new rural productive forces. At present the "two households" constitute 10.5 percent of total households in the province, and the rise of the "two households" reflects the change from a self-sufficient and semi-self-sufficient economy to a commodity economy, the change from extensive

farming to intensive farming has already taken a heartening step and the "science craze" in the countryside has appeared along with the development of the responsibility system and the "two households." The broad masses of peasants urgently need higher productivity, higher economic results and the realization of a whole series of technical and management methods for "high yield, quality and low cost." This, then, is the new situation and the feature of the present countryside. Consequently, freeing ourselves from the work methods and style led by the "left" thinking of the past, adjusting organs in light of the demands of new situations, clearly defining work tasks, improving styles and methods of work are important tasks before us that may by no means be postponed. To develop in line with the situation, agricultural, animal husbandry and fishery departments must conscientiously do a good job with construction in the four areas of thought, vocational work, workers and workstyle, and we must also formulate specific measures and conscientiously implement them.

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